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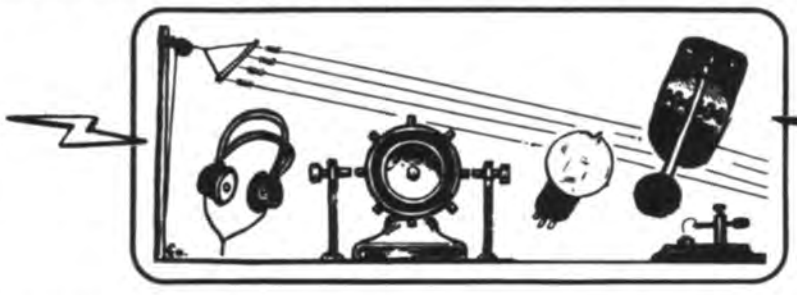
ST JOHNS, NFLD. • • • DEC 12 1901 • • • POLDHU

SPARKS JOURNAL

★ ★ ★ ★ SOCIETY OF WIRELESS PIONEERS INC ★ ★ ★ ★



RECORDING THE EARLY HISTORY & DEVELOPMENT OF THE WIRELESS

VOLUME 8, NO. 2 MARCH 4 1986 "DOWN EAST" EDITION

Operators on Achille Lauro and Gotenberg Radio, Star in "Frantic Antics" of Hijackers

Suddenly Göteborg Radio was on everybody's lips. The magnificent old M/S Achille Lauro had been hijacked and our old customer made the the initial announcement thru' SAG. CBS and CNN in New York, CBS in Toronto, BBC World Service in London plus many, many others from all over the world had us sweating for a while, trying to answer all questions.

When the cruise liner Achille Lauro was hijacked in the Mediterranean, even those who had never before heard of Göteborg Radio must surely have learnt about our existence from the extensive covering of the incident by the mass media. Little did we imagine on the afternoon of October 7th that the modest contribution on our part would result in a succession of telephone calls from journalists all round the world and in television interviews.

It all began when the Master of the Achille Lauro informed us, on our primary channel 1608, that his ship had been captured, adding that he was not at liberty to disclose its exact position. The situation was extremely serious as we knew from earlier contacts with the ship that she usually carried many passengers.

Mr Öjvind Aas, the RT operator on watch, who received the Master's distress message, handed over responsibility to Mr Artur Nyqvist, the duty officer in the search and rescue operations room, who in turn decided that the obvious thing to do was to inform the Italian Goverment.

We were now beginning to lose contact with the ship. In order to pass the complete information on to the right people in Italy, Mr Nyqvist chose to contact the Swedish Ministry For Foreign Affairs in Stockholm who immediately forwarded all the facts to the Italian Embassy. We were now convinced that the proper authorities in Rome would be alerted.

During the afternoon and evening we were discussing the emergency with the Italian authorities in Rome and Stockholm. As soon as we had got a clear picture of the situation, it was decided that anything which might interfere with the rescue work would have to wait, including contacts with the mass media. Our undivided attention was to be given to the passengers and crew of the Achille Lauro, whose lives were at stake.

Late that night, however, the news of what was happening somehow began to reach the outside world, and we were absolutely showered with calls from newspapers and radio and tv stations everywhere. As matters then stood we had no choise but to confirm the reports.

Many people are probably wondering why the Achille Lauro picked Göteborg Radio to deliver her urgent message. The answer is that this luxury cruise liner is a long-standing customer of ours and we often put her link calls through over our shortwave radiotelephone circuits, including many of her calls to Italy. This may seem a somewhat roundabout way of connecting holiday makers in the Mediterranean with their relatives in Italy, but they obviously feel that they are getting good value for their money, and I don't think I need to point out to the readers of this Bulletin that our operators and equipment are first class...

We cannot assess the consequences of the Achille Lauro hijack but we have all read about American warships being put on the alert and about the government crisis in Italy. All of us here at Göteborg Radio deeply regret the loss of life which this tragic event caused.

(Continued on Page 6)

'A Girl and Her Ship'

Our Youngest Mariner "Pro"

MEET...Funkoffizier [Radio Officer] MIKAELA REICHEL, SOWP 3593-M (DK5EJ/OH2SG). She hails from Essen, West Germany. "Mikaela", born in 1957 in Helsinki/Finland is probably one of the youngest members of the Society. Still a school girl, she passed her license for Amateur in 1977 as DK5EJ and in Finland as OH2SG. After school in 1977 she charged her hobby to professional radio; attending the R/O classes in the Institute of Marine Studies in Leer/W.Germany and Rauma/Finland. After being certificated in 1980 she worked on MS "BRAGE, MS Butte, and MS Bomin Emden. She started her career as R/O on passenger ships in 1982, the first year on MS "World Discoverer" (out of Seattle, WA.) then the Prins Oberon and since 1985 on the MS Berlin (pictured on the left). It is a "Dream come True" for this young ambitious girl who is now an accomplished professional. She will indeed "See the World" - and get paid for it. Her current schedule on the MS Berlin schedule cruises to many 'out of the way' places from Bali and S.E. Asia ports to Indiana Ocean Islands, Mid-East Ports, Med. ports from Suez, Istanbul call at most ports enroute Hamburg. Thence to Norway's North Cape. July and August from Leningrad, Helsinki etc. back to the Mediterranean. Want to go along ? We say ..." Bon Voyage". Ye Ed can hear some of you old 'Salts' muttering ... "T'aint like it uster be" Right, Matey'!

SPARKS JOURNAL QUARTERLY

SPARKS JOURNAL QUARTERLY

SPARKS JOURNAL USPS 365-050

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EDITORIAL OFFICE:3366-15 MENDOCINO AVENUE, SANTA ROSA, CA 95401 USA. (TELEPHONE 707/542-0898) EDITOR AND PUBLISHER - WILLIAM A. BRENIMAN

THE PRIMARY PURPOSE AND OBJECTIVE OF THE SOCIETY IS THAT OF COLLECTING, RESEARCHING, AND RECORDING THE HISTORY OF COMMUNICATIONS - PARTICULARLY THAT WHICH RELATES TO HERTZIAN WAVES AND THE WIRELESS OR RADIO-TELEGRAPH MODE OF THE ART.

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PUBLICATION DATE

SPARKS JOURNAL
MARCH 4 1986
"DOWN EAST" EDITION
VOLUME 8, NUMBER 2

SOCIETY OF WIRELESS PIONEERS, INC.

OFFICERS & DIRECTORS

OFFICERS, DIRECTORS, STAFF

Non-profit Historical Organization

Society of Wireless Pioneers, Inc.

Founded 1968 by William A. Breniman

Early Days of The Wireless

IN THIS EDITION

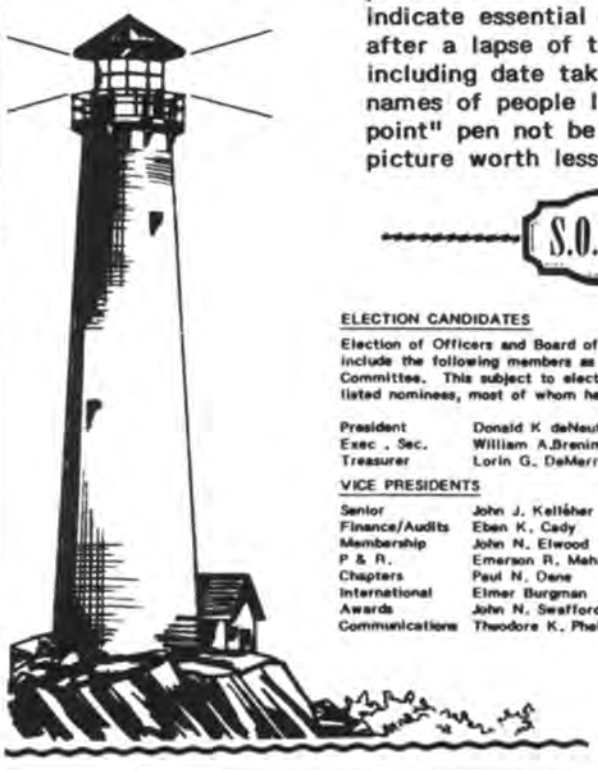
Click on Index item below

ARTICLES OF HISTORIC INTEREST

[*] Many have furnished pictures, manuscripts, clippings, etc. of both Wellfleet and Chatam. They include Barney J. Zweig, Ed hammons, G.X.M. Collier, L.E. Bachman, Edison Lohr, Wm W. Wyllie, Ben Jackson, Melvin J. Oliver, Frank Caswell in possibly others. Thanks to each. Some material remains to be published and proper credit will be given. We appreciate so many participating in this worthy project.

(**) NBD. Brandon Wentworth furnished the Bar Harbor Radio Story long ago. It was work up for publication in SPARKS IV However, for various reasons it was not published, hence "Brandy Published it in Booklet form - a very nice job indeed. He requests that we give special credit to Herbert C. Hovenden, 3329-SGP; Carl E. Herr -3101SGP and Fred M. "Hank" Grindle - 3395-SGP for the pictures and material supplied to make the booklet possible. Others mentioned include Harold Castner, LaRue Speker, Marion Varney and Ted Hancock.

Editorial Note: It would assist the Editor if all photographs and material sent for publication had the name of the donor printed written or printed on the back side of the picture or the article itself. Also please indicate essential information on pictures so after a lapse of time, we know its history including date take, place, "what it is" with names of people listed.. Suggest a 'ball-point" pen not be used as it often makes a picture worth less. Thank you.



S.O.W.P.

ELECTION CANDIDATES

Election of Officers and Board of Governors for the period 1985-1988 include the following members as recommended by the Nominating Committee. This subject to election results and acceptance by by listed nominees, most of whom have indicated their acceptances.

President	Donald K deNeuf	BOARD OF GOVERNORS
Exec . Sec.	William A.Breniman	James L. Brown
Treasurer	Lorin G. DeMerritt	Eric Walters
VICE PRESIDENTS		Alber L. Woody
		Herbert J. Scott - Chairman
Senior	John J. Kelléher	Paul Stevenson
Finance/Audits	Eben K. Cady	Earl N. Korf
Membership	John N. Elwood	Robert L. Farris
P & R.	Emerson R. Mehrling	Charles J. Coleman
Chapters	Paul N. Dane	
International	Elmer Burgman	
Awards	John N. Swafford	
Communications	Theodore K. Phelps.	

Ballots are scheduled for mailing to all members in early Aug.- results will be furnished all members.

SOCIETY OF WIRELESS PIONEERS INC.

Our Wavelength — Preserving Communications History

THE FOUNDER'S PAGE

The Skipper's Log

The Early Days of Broadcasting

During late 1922 and early 1923, "Ye Ed" was doing a weekly 15 min. "slot" on Station "KHJ" [Los Angeles] for John Daggett who at that time managed the Los Angeles Times Station. The program was called ..."Whats New this week in Radio". Ye Ed, at the time owned and managed the "Radio Concert Equipment Co." with a branch in Hollywood (The first radio store in Hollywood.)... He had also started the "Los Angeles Radio Institute" at 648 So. Hope St. (Schools and Colleges Bldg.). He was named "Radio Man of the Week" by RADIO DOINGS weekly magazine - one of the largest program publications in the United States in those days. The above is a 'repro' of the front page of "RD" which was owned by Bob Marshall who owned the Dubillier Condenser Company. An early bit of Radio History for the record.

Why Your Sparks Journal is Late

This issue of SPARKS JOURNAL [8-2] was scheduled for mailing late Dec. 1985. Regretfully, your editor had to undergo an operation on Dec. 2nd 1985 at the Univ. of Calif. Hospital Clinic in S.F.

I am happy to report the operation was successful and the physician reported all traces of malignacy removed which is very good news. The healing process has, however, been somewhat slow, taking much time for curative therapy. This combined with treatment for failing vision has preempted needed time to work up the Sparks Journal and also imput of more urgent Society business. Regretfully there are many letters I have not had time to answer and I most sincerely will appreciate your understanding.

There is little need to mention that our workload is very heavy and our need for more assistance to handle in a more expeditious manner. "Ye Ed" would like to be relieved of much if not all of the routine work. He feels that he could do a much more creditable job on the Journal if he could confine his available time to the publishing of Society releases and oversight on projects and operations of the Society. His suggestions and comments will be furnished to all members in a forthcoming letter which will also include ballot for our next election of officers. W.A.B.

PS: We plan to 'catch up' on the Journal schedule publishing four issues during 1986. Should we be unable to do this, we will see to it that you receive FOUR publications during 1986 or adjust coverage on dues record to compensate. However, on a positive note - we do have quite an accumulation of material ready for 'paste-up' on future issues. I expect to make it.!

A Sparker's "If"

(with apologies to Rudyard Kipling) *- PEI, Canada*
Credit - "Mess-Deck" News by Ragweed Press

If you can keep your head when all the buntings
Are losing theirs and blaming it on you;
If you can read through atmospheric crashes
With signals fading down to near "R-2";

If you can send and not get tired sending
And when you stumble, make a neat erase;
If you can read without the old complaining:
"His bloody Morse is just a damn disgrace";

If you don't fill the unforgiving minute
With sixty seconds worth of IMI's
And if you always use correct procedure,
But still don't talk too much, nor look too wise;

If you can live with buntings, jeeps and stokers
And tolerate both Pusser's rum and stew;
And copy when reliefs are in their hammocks
And never miss a group with every spew;

If officers and Chiefs and drunken Yeomen
Can heckle you and still your nerves won't fray;
Then you're a damn good sparker, son—you've made it!
You're earning every penny of your pay . . .

MUL.

The "Sparker"

Thanks to Johnny Sandison

THE FLEMING VALVE

THE FLEMING VALVE - First Diode production models by Dr. John A. Fleming of the world's FIRST VACUUM TUBE for Wireless reception - 1904. Fleming spent over 40 years as First Professor of mathematics and physics at University College, London and was noted as a specialist in the field of Wireless and he was partly responsible for the design of the first trans-Atlantic Station at Poldhu. His invention of the thermionic valve, or tube brought him Knighthood. for his "valuable service in science and industry." Picture courtesy of Marconi International Marine, Ltd.

Book Reviews

SALTWATER BOOKSHELF

Three SOWP Members Author Historical Classics

Monroe Upton

From the High Seas to Low Comedy

The subtitle on Monroe's book reads ..."Memoirs of Radio Man, Monroe Upton". I will have to say that this book which 'just washed ashore' is one of the most unusual and interesting ones I have ever read. In other words ... " IT IS my kind of boik". What makes it so interesting ? Well for starter ... Monroe has been more places, done more things, observed more of life in the raw (as well as in tuxedoes and sink gowns) than anyone I know. It is drawn form his own experiences as wireless-man, radio announcer and as an entrepreneur in many fields. He has rubbed shoulders with those in high places as well as unfortunates in nearly every corner of the world. Hollywood was his turf during the 'golden years' of radio when he knew many of the stars on first name basis.

The book is packed with pictures and loaded with the names of men and women I have known or were acquainted with. He has catalogued his vices and erotic adventures between 405 pages of adventures and life style few of us have ever experienced. To me this is a window on the past and few have 'gift' of recording them in the style he writes.

The tab on this book is $10.00 plus $1 for mailing and he allows as to how he is losing money on each one he sells and he is probably right as "Ye Ed" having published a book himself, knows whereof he speaks. Upton will autograph one of his books if members wish to buy. Send your order to Monroe Upton, C/O: Living Desert Press 3740 Ironwood Hill Drive, Tucson, Arizona 85745 . WAB.

Tom Kneitel

Radio Station Treasury 1900 1946

This is a "one of a kind" book . Our member "Tom" - K2AES has been the Editor of Popular Communications magazine, a monthly publication devoted to broadcast and communications hobbyists, DX'ers, and ehthusiasts. Over the years he has noted the need to record and document many phases of our history, especially that dealing with Call Letters, Licensing of stations and their operators and statistics dealing with growth of the industry and art.

Kneitel's book is in letter size book format, printed on quality paper 176 pages, including many many tables of interesting data and reference material that would take hours if not days to find - and perhaps not at all even in sizable communities with sizable libraries. While the data is tilted toward Broadcasting (Radio), it also covers some of our historical events of earlier days in the maritime field and in the use of radio communications over the world. The scope of his publication is worldwide - including Foreign B.C. Stations by Frequencies, Short wave is included, also conversion tables, etc.

"Tom" states the purpose of his book is to offer an overview of Wireless as it evolved from the early formative years and through the so-called Golden Years of radio broadcasting, and right to 1946 -- the beginning the time television broadcasting began in earnest..

We wish to thank Tom for the Credit he gave the Society in his Acknowledgements. Also worthy of noting was that to the late Howard S. Pyle, one of our Charter members (50-SGP) who became a silent key 11/72. Howard was an associate of "Ye Ed" in the CAA circa 1952, Seattle Region.

Radio Station Treasury (1900-1946) can be purchased from CRB Research, P.O. Box 56, Commock N.Y. 11725. Price is $12.95 plus $1 postage to USA/Canada/APO/FPO. U.S. Funds required on foreign order.

Brandon Wentworth

The Fabulous Radio Station—"NBD"

While you may read most of the contents of "Brandy" Wentworth's booklet ... "The Fabulous Radio NBD" in this issue of the Journal, you might like a more readable copy for your library. It is printed (type) on excellent stock, with a nice slick cover. The printing is much larger (and readable) than those of our Journal which of necessity has been condensed. It is 34 pages and measures 8-1/2 x 5-1/2. Order direct from Brandon Wentworth,P.O. Box 862, Southwest Harbor, ME 04679. Price is $4.50 ppd.

We hope you have enjoyed reading about "NBD" in this issue. If you have, why not drop Brandy a line and tell him so.. He has done a wonderful job in retaining this bit of history for posterity.

TELEGRAPH STAMPS

By- D. K. de Neuf WA1SPM

"Telegraph Stamps" were issued by a number of telegraph companies primarily for use in free franking priveleges issued to various railroad, newspaper and express company officials when their concerns were large users of its much like "postage stamp books" are issued today by the U. S. Post Office.

One of the earliest companies to issue such stamps was the California State Telegraph Company in 1870. It operated lines between a number of California cities including one from San Francisco to Marysville via San Jose and Stockton.

The Pacific Mutual Telegraph Company operated between St. Louis and Kansas City in 1884. One of its 10 cent frank stamps is shown below (a). In 1910 organization was acquired by the Postal Telegraph Company.

The Commercial Union Telegraph Co., in 1887 had operating lines from Albany through Troy and Berlin to Adams, Mass. One of its 25¢ franks "good for 20 words" is shown in (b) below.

Some of the Postal Telegraph Company stamps were printed with the initials of a railroad, such as C. G. W. and I. C. and while most "frank stamps" specified the amount of its value expressed in cents or in the number of words, the type shown as (c) below merely says it is "good for one telegram"

In 1942 Postal issued a frank stamp, pink in color, to all its employees in the Armed Forces. It is depicted in (d) below.

"The Baltimore and Ohio Telegraph Co. of the State of New York" was incorporated in May 1882 in several states. It's lines originally extended along the B & O R.R. right-of-way. "The Connecticut River Telegraph Company" operated between New Haven and Hartford and connected with the B & O Telegraph Co. One of the Joint operations' 5¢ stamp is shown as (e) below.

Western Union issued a wide variety of stamps for many years, and some of the early wireless telegraph companies also issued frank stamps. See (f) & (g) below.

The World Telecommunications Conference was held in Atlantic City, N. J. in 1947. A frank stamp for use by attendees on messages destined to overseas points was issued cooperatively by All America Cables, Commercial Cables, Globe Wireless, Mackay Radio, RCA Communications, and Western Union. See (h) below.

Historical Paper

We consider Donald K. de Neuf to be the most outstanding Historian in the field of Communications in the United States. We appreciate his dedication to the preservation of this precious information. Regretfully we had to preempt space we would normally use for his articles for the feature of this issue. Coming issues will carry increasing volume of the interesting cross section of communicatrion history he furnishes.

Radio sparked Santa Rosan's adventures

By CLARK MASON
Staff Writer

It was easy to get a job on ships going just about anywhere in the world for the young men they nicknamed "Sparks."

Borneo, Java, Singapore, Shanghai, Sri Lanka, the Celebes, Panama . . . the names conjure up romance and adventure.

"You name it, I've probably been there," says William Breniman, who, beginning in World War I, sailed on more than 30 ships to exotic ports o'call as the "wireless" operator.

Breniman, 84, of Santa Rosa, has spent much of the last 20 years tirelessly documenting the history of wireless telegraphy, the precursor to early radio and the "tree" from which modern communications spring, including television and radar.

He is founder of the Society of Wireless Pioneers, a non-profit group with 5,000 members, comprised of retired and active professionals in radio and related fields. The organization, Breniman said modestly, is probably the only Santa Rosa-based association listed in the World Almanac.

There are about 15 or 20 members in Sonoma County, according to Breniman, and 300 to 400 in the Bay Area, including one member who is believed to be the first disc jockey, broadcasting news and music in San Jose in 1909.

Copies of the society's hefty, quarterly journal, packed with history of the medium, its importance to navigation and saving lives, is mailed to members around the world. Breniman is also the editor and publisher.

Breniman recounted how his interest in telegraphy began as a boy, starting when he traveled from Colorado to Wyoming to see relatives and watched station agents on the Union Pacific Railroad send their messages on the wire.

But it was the sinking of the Titanic in 1912, which focused worldwide attention on the importance of wireless, that really changed Breniman's life and gave him the ambition to become a wireless operator.

Back then, they called the operators "Sparks," or "Sparky" because when they tapped their telegraph key, sparks would flash from the rotary spark gap transmitters and the air would be filled with the smell of ozone.

"It used to make an awful sound, a great deal of noise," Breniman says, but that changed when radio tubes became commonplace in the early 1920s.

The Titanic's sinking caused major changes, including the requirement that all ships have wireless and that it be monitored 24 hours.

The nearby S.S. Californian's operator tried to warn the Titanic about icebergs prior to the tragedy, Breniman said, but the Titanic operator put him off because he was busy sending a backlog of passenger cables.

The California operator completed his tour of duty and went to bed and therefore never heard the SOS from the Titanic when it struck an iceberg. Another liner that was much farther away, the H.M.S. Carpathia, picked up the distress signal and rescued more than 700 passengers.

Following the Titanic tragedy, Breniman, who already knew Morse Code, learned International Code, which he used a few years later along with semaphore when he joined the Navy. His first tour to the west coast of South America, the Gulf and Europe, was marked by an incident in Chile where Germans unsuccessfully tried to take over the ship in the dark of night.

After the war, Breniman enrolled in the Marconi Wireless Institute in the Call Building in San Francisco to brush up on commercial requirements for a license.

A week after graduating, he was aboard a Pacific Mail liner headed for Panama, working not only as the wireless operator, but purser and freight clerk for $60 a month.

It was the beginning of his ship-hopping days. Breniman can recall arriving in San Francisco about 9 a.m. from a trip up the coast and by 1:30 p.m. the same day being outbound through the Golden Gate, assigned to another ship.

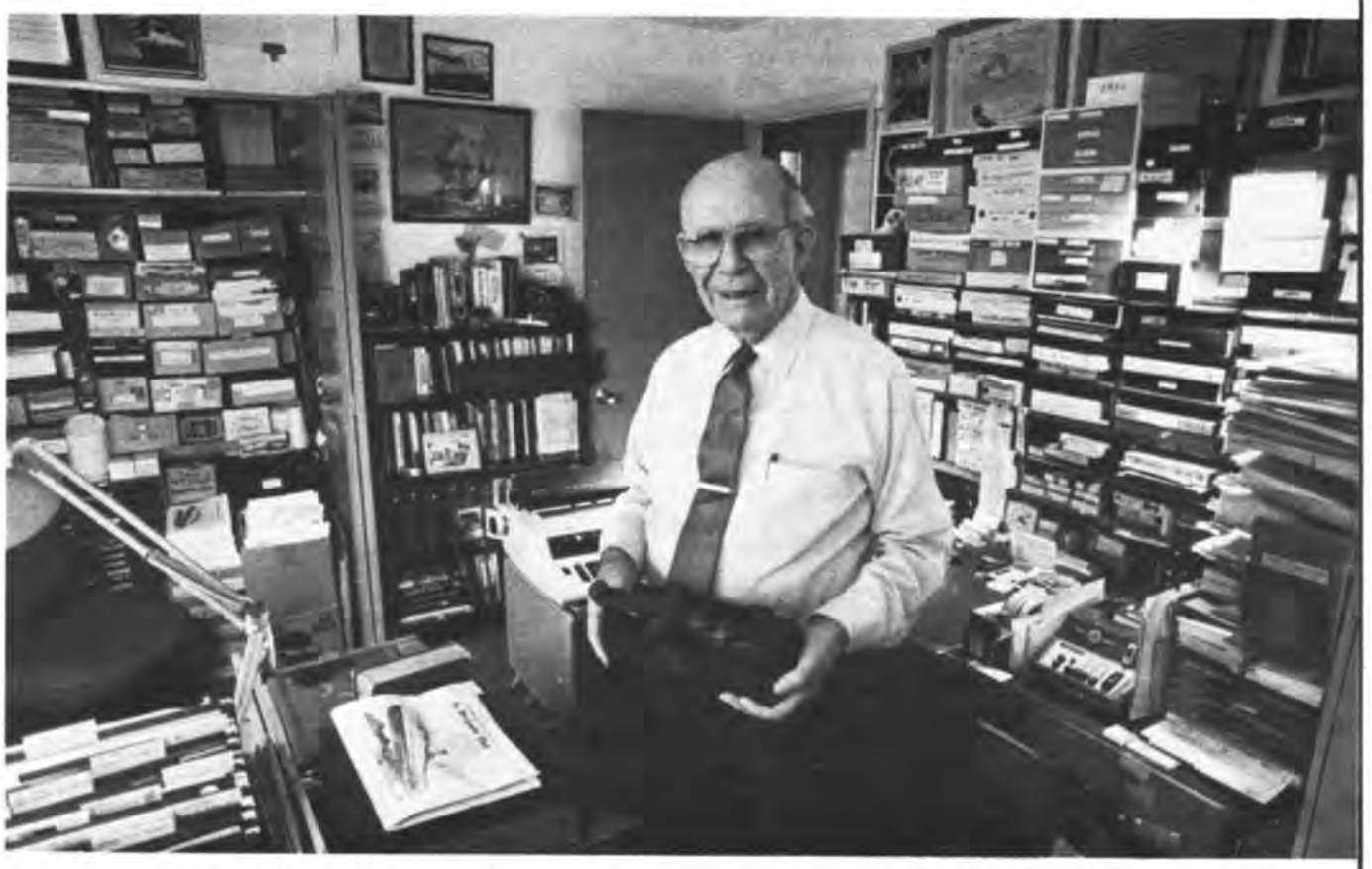
But a career at sea was not something Breniman wanted for the rest of his life. During the decade of the twenties, he opened up what he claims was the first retail radio store in Hollywood, then went into wholesale in Los Angeles.

Breniman switched gears again in the mid 1920s when he learned to fly and joined the Civil Aeronautics Administration, which later became the Federal Aviation Administration. He helped establish and maintain a radio network that supplied weather information for mail pilots.

He eventually became deputy chief of the CAA communications division in Washington D.C., then transferred to Seattle where he was chief of operations.

Shortly after retiring to Santa Barbara in 1958 and opening a travel agency, Breniman formed the Society of Airway Pioneers, designed primarily for retired employees in the federal airways system.

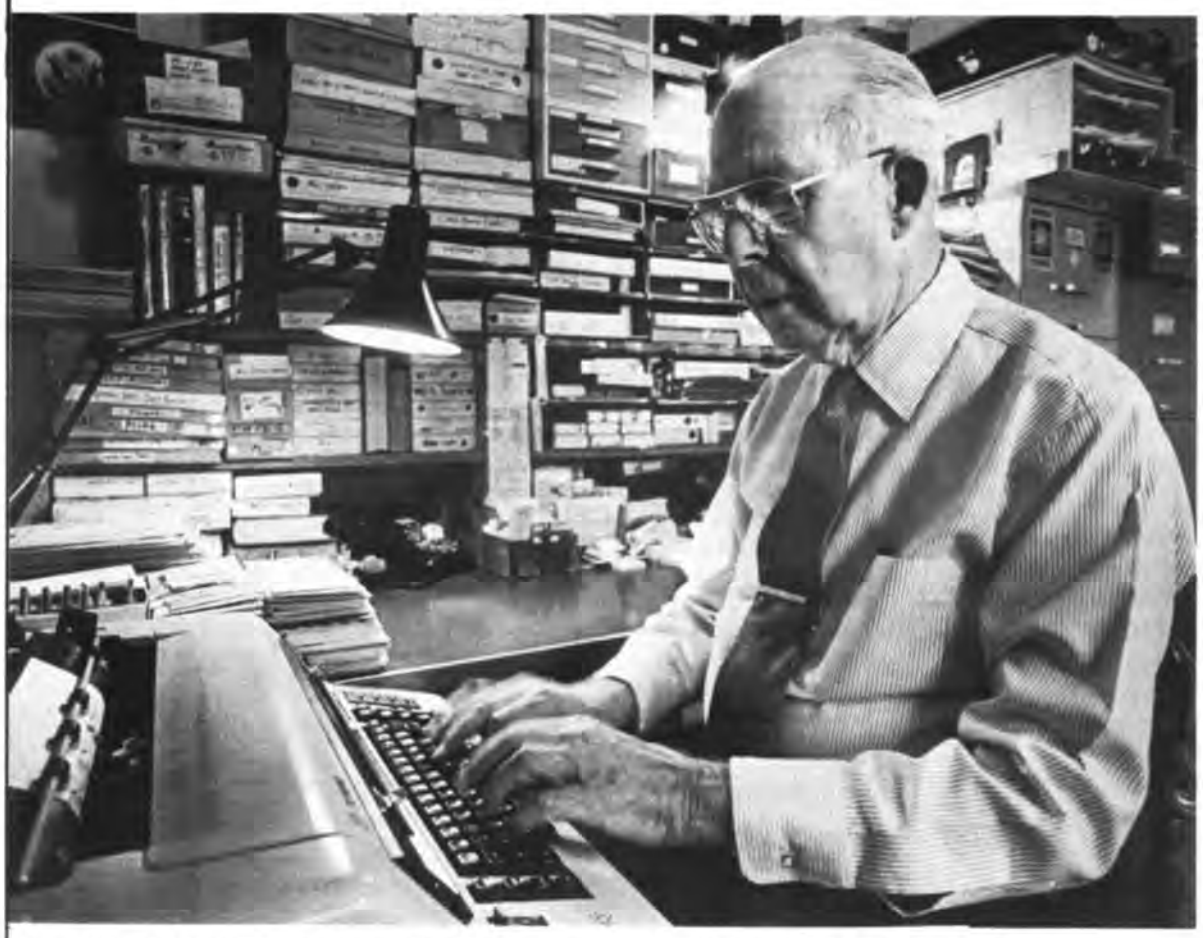
After moving to Santa Rosa — "we wanted somewhere with greenery" — Breniman in 1968 founded the Society of Wireless Pioneers. He said the open houses he was having for radio aficionados were getting too big and besides, he wanted to record the early history of the medium before it went to waste and he became a "silent key."



William A. Breniman holding Key used in 'early day' Wireless at Society's "HQ" Office.

It all started when Charter Member Mario J. Spagna [Sr.-SGP-67] loaned his neighbor, copies of "SPARKS JOURNAL" to read. The neighbor found them so interesting he suggested to his son, Clark Mason who was a Staff Writer for the Santa Rosa Press Democrat that he might like to look me up and write a story about the Society. So it came about that the story on this page appear- in our local Press Democrat on the front page of the Metro Plus Section. Incidentally, the "PD" is one of the older papers in the West having started 129 years ago. It is now one of the New York Times family of newspapers. It wasn't long until others outside the Santa Rosa area started to hear about the news-story and wanted copies. Since I am nearly out of copies to send or show members, I decided it might be well to include it in this issue, then all members will see what elegant spacious quarters we enjoy! One might mistake our editorial office for that of Mark Twain's newspaper office way back when. So now you know ...

TITANIC CHANGED HIS LIFE



William Breniman of Santa Rosa is editor and publisher of the Society of Wireless Pioneers' quarterly journal.

Silent Keys

They that go down to the sea in ships, that do business in great waters; These see the works of the Lord, and his wonders in the deep.

Psalm 107-23-24

A Proud Craft - Rich in Heritage and Tradition

SERIAL NO.	NAME OF MEMBER	*	CALL	DECEASED DATE
2101-SGP	MAURICE A. MOORE	ND	———	Sept —, 1983
3058-P	DAVID C. HARDACKER	ND	W7TO	June 21, 1984
2063-SGP	LEROY MICKEY	H	———	Oct 3, 1985
2027-SGP	R. RUSSELL EGGERS	ND	———	Oct 6, 1982
4024-V	ROBERT J. UELAND	ND	KA∅CYK	Nov 4, 1984
1061-P	EDWIN M. HOLLIS	ND	K4CN	May 2, 1985
35-SGP	ED G. RASER	ND	W2ZI	Oct 22, 1985
429-P	ALFRED J. BARTTRO	ND	———	Apr 22, 1985
3057-M	ELLIS B. WILSON	ND	WB2TZS	Dec —, 1983
459-SGP	ALBERT C. MOLTZER	H	———	Oct 24, 1985
1189-SGP	CLARENCE W. MULLIGAN	ND	WB4VAP	———, 1985
3309-P	HEINZ W. MILARK	LI	N2LK	Nov 1, 1985
2625-P	LEWIS C. FAY	ND	AA5Q	Oct 28, 1985
3187-V	RICHARD L. AHRENS	ND	KA7AUG	Nov 7, 1985
4521-V	ROBERT H. WOLCOTT, JR.	ND	W4WYI	Oct 22, 1985
2563-P	DONALD LAWSON	ND	WA6MDC	Dec 28, 1984
1445-SGP	WALTER O. LEE	ND	W2KTO	Nov 14, 1985
4164-M	DENNIS DANIEL	ND	N7ENW	Dec 3, 1985
297-P	WALTER BAUMGARTNER	H	W7FE	Nov 28, 1985
2115-SSGP	WILLIAM J. O'CONNOR	ND	WB2MID	Dec 5, 1985
104-SSGP	WILLIAM G. GERLACH	ND	W6BG	Dec 12, 1985
4153-P	GEORGE C. COFFIN	H	VE1BZZ	Dec 12, 1985
1918-P	HARRY B. WATTSON	ND	W5BQE	Dec 18, 1985
1610-SGP	MARLO G. ABERNATHY	AZ	W6ABD	Jan 7, 1986
2468-P	COL. MILTON E. SAYERS	ND	———	May 23, 1985
4040-P	DONALD W. GALLAGHER	ND	W8NTL	Unknown date
645-SGP	PAUL WILLIAMS	H	W6WEQ	Feb 3, 1986
2406-P	CARROLL W. SHORT, JR.	ND	W7CV	Jan 18, 1986
3653-V	JOHN H. WYCKOFF	C	KA2HOJ	Oct 11, 1985
197-P	BENJAMIN BERNSTEIN	A	———	Nov 4, 1985
511-SGP	WILLIAM P. CORSON	ND	VE7PC	July —, 1985
2942-P	CDR. KENNETH BINFORD	ND	KZ6D	LATE —, 1985
2156-SGP	ERNEST K. ADLMANN	H	———	Feb 6, 1986
560-SGP	ERNEST J. SCHENK	ND	W7SBM	Feb 7, 1986
2185-P	MALCOLM J. MacDONALD	ND	W1AXF	Feb 18, 1986
67-SSGP	MARIO J. SPAGNA	H	———	Feb 23, 1986
4333-P	RAMSEY H. McDONALD	ND	W4OHD	LATE '85 or EARLY 1986
1651-P	CHARLES B. THAWLEY	ND	———	Feb 20, 1986
1182-SGP	MELVIN J. RICHARDSON	LI	———	Feb 6, 1986
1715-SSGP	RUDOLPH M. JENSON	ND	———	Mar 1, 1986

*Legend

H - Heart A - ACCIDENT ND - No Details
C - Cancer SI - Short Illness NC - Natural Causes
S - Stroke LI - Long Illness HP - Health Problems
AZ - ALZHEIMER DISEASE OA - Old Age Ailments

Mario J.Spagna

Ed Raser

Richard K. Egolf

ACHILLE LAURO—A RENDEZVOUS WITH FATE

(Continued from Page 1)

The events described here naturally raise questions about the safety aspects of the life at sea, which is exactly what our development engineers are looking into right now. In the Achille Lauro incident only manual services were involved. The distress message, for obvious reasons, was not complete: for one thing, it did not include the ship's position.

We are working on a system which when ready will have our Maritex linked to an automatic navigation system such as satnav. The main Maritex computer at Göteborg Radio will then be able to ask our new "black box" at regular intervals for data on the ship's position and possibly also on its course and speed.

Various types of distress messages, such as hijack, fire, collision and bomb threats will be pre-stored in the device. In case there is an emergency, pressing a button will automatically forward the alarm to Göteborg Radio which will immediately take action according to a plan decided on in advance by the shipowner or master for dealing with that particular emergency.

The new system will also enable the owner through use of a special code to retrieve from the Maritex computer the positions of his own ships. Should the "black box" fail to answer a request by the computer for information on the ship's position, the alarm will also be triggered at Göteborg Radio.

We have more ideas along these lines but it would also be very interesting to hear the views of our readers on these things. Do write in with suggestions but please don't take too long about it.

Mats Öhrström
Station Manager, Göteborg Radio

We shall Always Remember Them

Walter Baumgartner

WALTER BAUMGARTNER - W7FE (Since 1925). Picture taken aboard the SS Adm. Peoples with Jess Myers. "Walt" enjoyed SOWP so much he left a legacy to sustain our work.

MARIO J. SPAGNA - 67-SSGP - Picture taken in 1914 shows Mario at home between ships copying KIE/KET traffic. First ship 1912 on the S. S. Camino - WQC.

ED G. RASER - W2ZI. Picture taken 11-2-54 at a DeForest Pioneer meetin in NY honoring Dr. Lee DEForest. "Ed" was SOWP Area Director for many years.

RICHARD S. EGOLF - W2WX - Picture taken same meeting with Raser. Dick was an ardent supporter of SOWP and has furnished many pictures and memorabilia.

SAG Bulletin

Feature story on Page 1 was reprinted from the Autum SAG Bulletin. It tells of communications between Cruise ship Achille Lauro and Göteborg Radio. The "Lauro" chose to be "QSO" with the Swedish station due their fine servide. We hope to run a feature on Swedish stations in an early issue of the Journal.

Televerket Radio

S.O.W.P. Chapters & Nets

• SOWP CHAPTER NEWS •

Elmo N. Pickerill Chapter - XI

[TOP]

Thomas G. Kilpatrick - Director Pickerill Chapter has just awarded a Honorarium from SOWP HQ. TO Mrs. Gioia Marconi Braga. Oct. 10 1985.

[Bottom]

Mrs. Gioia Marconi Braga (Guest of Honor) at SOWP meeting, Chapter XI on Oct. 10 1985. Director "Tom" Kilpatrick K3AGT at left; Franklin F. Shellenbarger (Shelly) Right KC2PS.. Shelly edits Chapter XI's fine Newsletter. Note SOWP signal FLAGS at back.

Marconi's Daughter is Honored Guest

It was a 'once in a lifetime' experience for 97 members attending the Pickerill Chapter's meeting Oct. 10 1985 to have as their Guest, the daughter of the legendary man of Wireless, Sr. Marconi. His daughter, Mrs. Gioia Marconi Braga who graciously related her life with her father was indeed a most charming lady. All members present gave her a 'standing ovation' for her interesting and entertaining talk. Ed Raser, co-founder ofthe Elmo Pickerill Chapter was presented a Certificate of Appreciation for his outstanding recruitment of Society members (over 100). Henry Warner, CHOP Trans-Con and the Yankee SOWP Nets was presented a certificate for his outstanding efforts. Also Jack Schantz for his dedicated service to the Chapter "Shelly"KC2PS (Sec/Treas.) puts out an excellent News Letter for the Chapter keeping Chapter members informed. It is the 'glue' that holds the Chapter together. (Next meeting is April 24th 1986).

CAPITAL AREA CHAPTER [X]

Last report from Sec.Treas. Bill Brown indicated the Chapter would enjoy a large turn-out of its members at its scheduled meeting on March 15th. The Capital Area Chapter continues to be one of our three most active chapters thanks to the constant attention of its officers and the consummate interest of all members.

SEYMOUR STRAUSS - W4IKU - Former SOWP CHOP and who has spent many years on Society nets has moved from Florida to Calif. His new and temp. address: 4838 "E" Ave. R-12. Palmdale, CA 93550. Hopes to check in Sap.

HARRY A. "Jock" MACLAREN -W5FGO Early day "Marconi-man" and the Society's Representative on the Gulf Coast area enjoyed a visit during the visit of Mrs. Barage when she visited his booth at the New Orleans World Fair in June of 1984. "Jock" was 'manning' the Marconi booth for the local Radio Club of which he is also a member. A very pleasant visit reported.

Gulf Coast Chapter - XVIII

S.O.W.P. Net News

Question/Answer Manuals for FCC Examinations are now available from W5YI REPORT [Fred Maia-Editor Dits and Bits) P.O. Box 10101. Da;;as. TX. 75207. Q/A Manuals will be ppd. $5.25 each. These cover 1-class each with multiple Q/A (and asnwers) as follow: Novice - 200; Tch/Gen-500; Advanced-500; Extra Cl. 400. VE's and Instructors can obtain volume discounts.

COMMUNICATION "TID-BITS" from W5YI:
You have probably heard about KU-band and C-Band satellite programming and didn't know the difference. The Ku-band is from 12-14 GHZ, C-Band: 4-6 GJz/ C-Bamd is traditionally the preferred band because of its superior propagation characteristics. Ku-band is susceptible to weather inducted outages.

WIRELESS TELEPHONES
A rash of malfunctioning 911 calls is being reported by many municipalities across the country. "911" is reserved for EMERGENCY CALLS ONLY. Low batteries on the Wireless Phones seen ti be the culprit. If you have one of these units, better check the battery, otherwise you might have problems.

SOWP NETS & SCHEDULES

S.O.W.P. SOCIETY OF WIRELESS PIONEERS, INC.

Eff. March 1'86

NET NAME	DAY	TIME	TZ	FREQ.	NCS	ANCS
TRANS-CONTINENTAL (Oscar Harrison)	Thu	1000	E	14115	W1HRQ-Hank	W8CCN-Tom
TRANS-CONTINENTAL II	Tue	1000	E	14115	W1HRQ-Hank	K4NP-Vic
VANCOUVER, B.C. Centennial-Expo.'86	Daily	0915-1000	P	147.54 FM	VE7AAT-Art	VE7YL-Elizabeth
TRANS-PACIFIC	Thu	2100	P	14010		W6EB-Elmer
VK3DGC Net	Daily	0700	I	14055	PA3GL-Gon	
PICKERILL	Mon	0900	E	3670	W3FYD-Jack	K2IC-Earl
	Mon	1000	E	145.135 FM	W2EEQ-Russ (Mt. Carmel) (Don Wasten Memorial Net)	
	Sat	1000	E	3670	W3FYD-Jack	K2IC-Earl
(SSB)	Sun	1400	E	3913	K2IC-Earl	K3AGT-Tom
SOUTHEASTERN	Sun	1400	E	7055	K4TY-Bill	K4MDV-Dan
RICHARD JOHNSTONE (Pacific Coast)	(No.)Thu (So.)Fri	2000 1530	P P	3555 7084	NCS rotates weekly-W6BNB-Bob; N6FZE-Pete; K62UP-Chuck	
HAPPY HOUR (SSB)	(No.Calif)Mon-Fri (So.Calif)Mon-Fri	1700 1630	P P	3947.5 3947.5	W6BFL-Jess W6UBV-AL	W6TQU-Hap K6AAG-Robbie
YANKEE/ EAST COAST	Sat	0930	E	7040	W1HRQ-Hank	
CAPITAL (SSB)	Sat	0900	E	3665	W4NK-En	W4MU-John
	Tue	1000	E	3966	W4NK-En	W4MU-John
JACK BINNS	Tue	2000	P	3555	VE7CME-Ted	WA7CJV-Viggo
INLAND SEAS	Mon	1900	Otrial-1815		W8TP-Ted	
	Mon	2000	C	3555	W8TP-Ted	W8ISU-Bob
SWISS (Edelweiss) **Local Swiss Time	Sun	1015	L**	7027	HB9AL-Hans	HB9EYO-Harald
GONZALES	Wed	2030	P	3520	VE7DBC-Dave	VE7ZH-Len

- HIGH SPEED CODE PRACTICE SCHEDULES -

Speeds: 40,45,50,55 wpm Sunday 1930 -P- 3525 K6ZIA-Shitty / SOWP
(Ends @ 40 wpm w/propagation bulletin) &7025
(Certification Tests in April and October start one hour earlier)

Speeds: 40 - 60 wpm, Mon 0130 I 3523 W1NJV-George (From N4KE,
-in 5 wpm steps. Thu 0130 I &7023 December - April)
(Certification Tests in November and May, sponsored by Conn. Wireless Assoc. and SOWP)

NOTICE - Please address inquiries or send changes or corrections to our V.P. Communications, Mr. Theodore K. Phelps, 6289 Olde Orchard Drive, Columbus, Ohio 43213. [W8TP]

"Keep your words soft and sweet just in case you have to eat them"

"It's better to be rich and healthy than poor and sick."

"When I'm right, no one remembers. When I'm wrong, no one forgets."

"I don't really know what I want, so why am I killing myself to get it?"

"Prices subject to change . . . according to customer's attitude."

"Make someone happy today."

Marconi's South Wellfleet Wireless Station

The 'BIG' Thing . . .

"Transmitting Across The Atlantic"

Marconi's Dream Comes True !

THE CAPE COD MAGNET

WRITTEN BY GLEN KAYE

FURNISHED BY FRED ROSEBURY

BIRTH OF AN IDEA

The experiments of Heinrich Hertz inspired the idea. This German physicist first demonstrated the existence of electric and magnetic waves, and with this revelation young Guglielmo Marconi began dreaming of a way to send messages from transmitter to receiver without the aid of wires.

In 1894 Marconi retreated to a top floor laboratory of his family's Villa Grifone near Bologna, Italy, and at the age of twenty began his experiments in earnest. At first Marconi used homemade equipment, testing and repeatedly modifying it, each time stretching to greater limits the distances that signals could be received from a transmitter. That first winter it was 30 feet. In 1895 it was one mile. Then using more powerful equipment it was ten, then twenty, then fifty miles. And by 1901 a 200-mile range was achieved. Wireless telegraphy was suddenly the rage of Europe - and then of America.

SPANNING THE OCEAN

For Marconi the 'Great Thing' was to transmit wireless signals across the Atlantic. So to accomplish this, stations were built at Poldhu, England, St.Johns, Newfoundland, and South Wellfleet, Massachusetts.

At this stage of wireless technology relatively long electromagnetic waves were used as signals. Transmitting great distances therefore required great sensitivity of receivers and tremendous power. Huge rings of masts were thus installed to support the needed antennas, but these were destroyed at all three stations by storms and were replaced at Poldhu and South Wellfleet by sets of four wooden towers, each 210 feet high. Within each powerhouse two kerosene-burning engines produced 2,200 volts of power. When fed to a Tesla transformer, the power was stepped up to 25,000 volts - the energy needed to transmit long-wave signals so far.

On January 18,1903 the attempt was made. Messages were broadcast in international Morse code, and with elation the official communiques of President Theodore Roosevelt and King Edward VII were exchanged by the two stations. It was the first two-way wireless communication between Europe and America.

THE YEARS OF OPERATION

Within months the South Wellfleet station was regularly sending American news through Poldhu to the London Times. And in return a telegraph line connected Cape Cod's wireless station with the South Wellfleet telegraph office, which relayed European messages to the New York Times.

Ocean-going vessels quickly adopted Marconi apparatus to receive news broadcasts, and soon the ship-to-shore transmittals were a major operation; business and social messages could be sent for fifty cents a word.

The station's effectiveness was limited, however, so broadcasts were made between 10 p.m. and 2 a.m. when atmospheric conditions were best. This brought little enthusiasm from local residents, for the great three-foot rotor, supplied with 30,000 watts of power, produced a crashing spark heard four miles downwind.

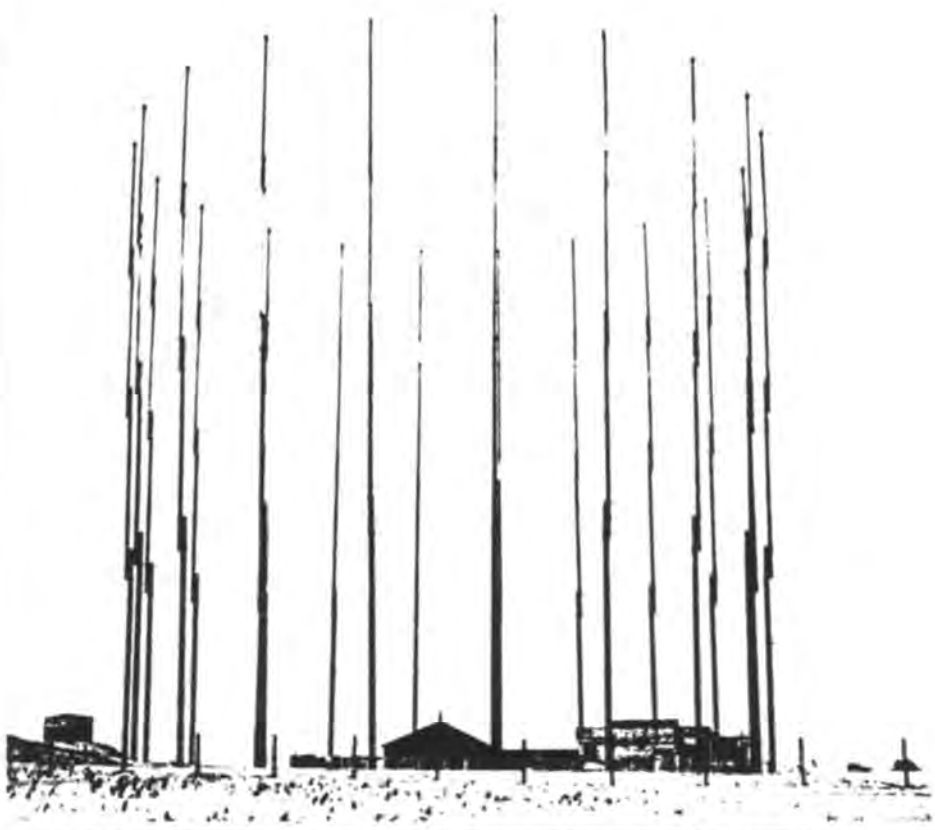
Novel objects have a way of becoming routine, and so it was with wireless telegraphy. The romance of communication with ships at sea remained high, however, and rose higher with repeated sea rescues. Interest reached a dramatic level with the SS Carpathia's wireless-aided rescue of over 700 people from the ill-fated SS Titanic in 1912.

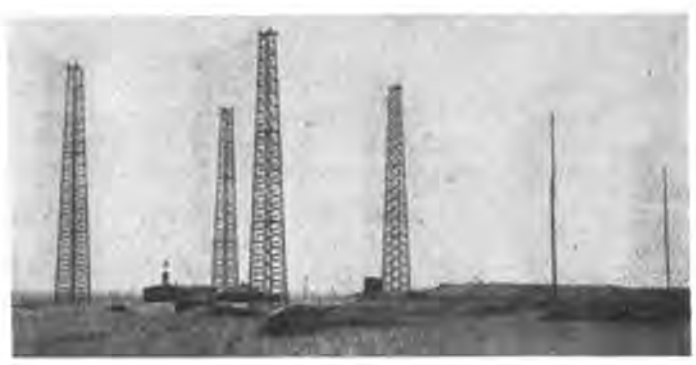
DEMISE

For fifteen years the South Wellfleet spark-gap transmitter continued in commercial use. Skilled telegraphers sent out messages at the rate of 17 words a minute, and station "CC" served in effect as the first "Voice of America." But its end was inevitable. The sea cliff of South Wellfleet was eroding three feet each year, and by 1916 the easternmost towers

30

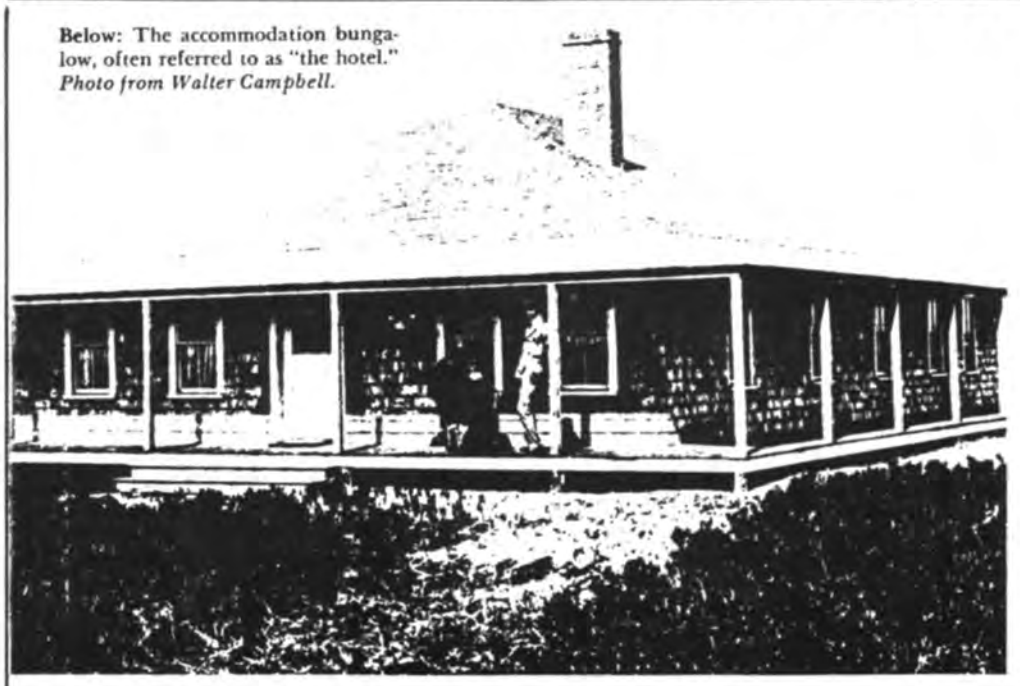
Below: The first South Wellfleet station shortly before its destruction by a gale in November, 1901. *Marconi Co. photos.*





MARCONI WIRELESS TELEGRAPH STATION AT SOUTH WELLFLEET, MASSACHUSETTS
Towers 215 Feet High.

Below: The accommodation bungalow, often referred to as "the hotel." *Photo from Walter Campbell.*



were threatened with collapse. The station was closed the following year by the Navy to ensure security and news censorship during World War I, and all the while successive inventions were making spark-gap transmission obsolete.

The station never reopened, and in 1920 was scrapped. The barn-red towers were dismantled, useful equipment was salvaged, and the buildings, once filled with the excitement and familiar sounds of wireless communication, were abandoned.

WCC in Chatham replaced old CC, and today it is still the most heavily used ship-to-shore radio station on the East coast.

A CHANGED WORLD

It was an era of new achievements and new horizons. Communication by wireless was a part of this, for it affected the way the world was viewed and how societies worked. It heightened interest in events beyond the bounds of daily contact. It affected national unity. It raised new possibilities of what could be accomplished. It brought new efficiency to business-and to warfare.

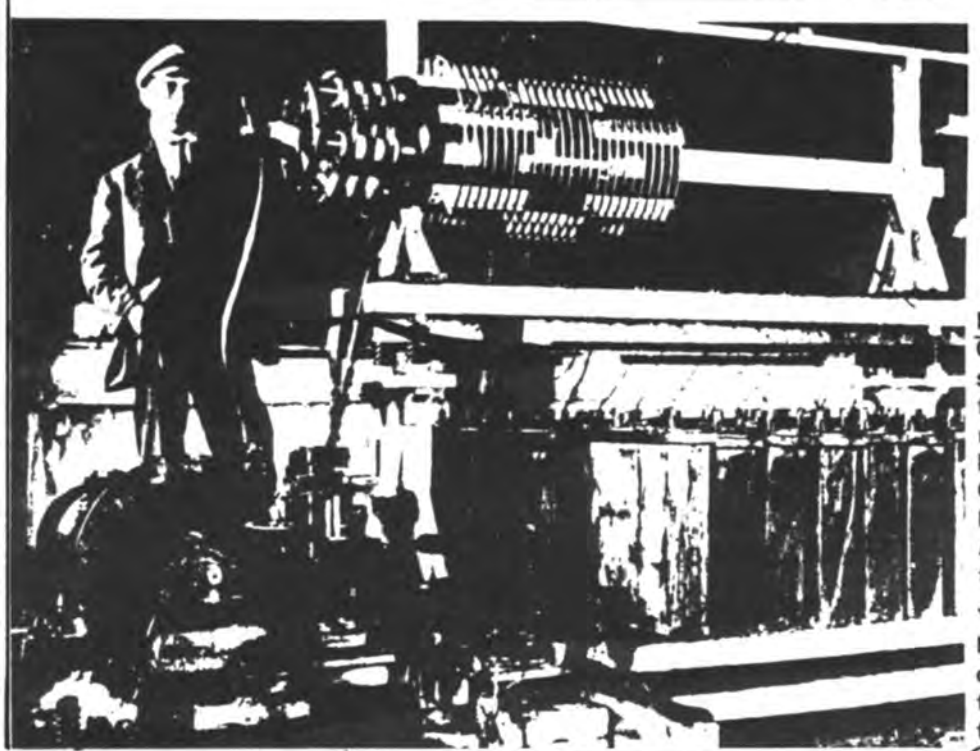
For a lifetime Marconi continued his research in communication electronics. His work yielded many improvements in wireless, but he also created the foundation that would lead to radio, radar, and microwaves. Marconi's impact was great. And when he died, a final respect was paid as all wireless around the world were silenced in his honor. No other person had ever received such recognition, and no others have received it since.

Marchese Marconi, G.C.V.O., LL.D., D.Sc.

The four towers pictured above matched the arrangement of the installation made at Glace Bay, Nova Scotia and Poldhu, England. They were 210 feet high, 24 feet square at the base and 8 feet at the top. Base legs (corners) were set on and in concrete bases which were 30 feet square and 4 feet thick. Beach erosion at a rate of about 4 feet per year have taken their toll. However by the time it was known the station had become obsolete due to new equipment developed.

Right: Charles E. (Charlie) Paine who carried Edward VII's reply from the Marconi station to the Wellfleet telegraph office. *Photo by Robert S. Coe.*

Below: The 25,000 volt Tesla transformer assembled by Carl Taylor. *Photo from Walter Campbell.*



Editorial Comment

HOW TO GET THERE

Cape Cod National Seashore is located along the eastern part of Barnstable County, about 50 airline miles from Boston and 200 airline miles from New York City. The Cape is served by U.S. 6, 6A and 28. To reach the Marconi [Wellfleet] area one would drive on US-6 toward Provincetown (end of highway). Enroute, skirts most towns but runs near Orleans, then Eastham, then North Eastham. After passing North Eastham the turn off (right) is about 2-1/2 miles to the Marconi Station AREA. The site is about 1800 acres large. An interpretive shelter tells the story of the first wireless message to England on Jan. 19 1903. cx

Ye Ed, a former Marconi Company employee visited the site of this historical monument on May 5 1967. The only visible remains was part of the cement block which anchored the towers. As a memento he took a small piece of this crumbling cememt and has it displaced on the wall of his den.

WCC - Chatham Radio

By M.D.Hall-3117-V K2LP

Foreword

The purpose for assembling this monograph, on the early days of wireless, on Cape Cod, is to chronologically document the events, as they occurred through the first four decades of operation. Bits and pieces of information relating to the RCA Radiotelegraph station have appeared from time to time in the various journals but not as a historical sequence.

"WCC" is known to thousands of seagoing operators and other wireless buffs around the world. Much interest has manifested itself in the form of present day Wireless Societies and Associations, whose primary function is the documentation and preservation of this very type of installation.

Old time retired telegraphers derive a great deal of enjoyment from reading and reminiscing about those struggles on the long wavelengths, with those massive antenna systems and those enormous Spark Gap and Alternator transmitters, thought to be the last word in communication at the time.

The dawn of Trans-Atlantic communication was brought to reality at Wellfleet with the magnificient installation of Marconi. Before two decades had elapsed, the RCA Radiomarine station "WCC" began operation at Chatham, which sixty-five years later is still enjoying great success in the same building. It is the largest coastal marine communication station on the Atlantic, exhibiting the latest in state-of-the-art electronics, including SITOR, Radio teletype and manually keyed circuits using "bugs" and keyboards and even straight keys.

Acknowledgments

My profound thanks go to Mr. William Farris, Manager of "WCC" Chatham, for making this documentation possible. His genuine enthusiasm for the project is greatly appreciated. The fine collection of photographs and memorabilia he has made available for study is the prime source of information on the Chatham and Marion installations. Mr. Francis Doane of Chatham and Mr. Bill Fishback of Harwich have supplied many facts concerning the operation. Mr. Bruce Boyd of Maryland visited the Marion installation in 1932 and reveals data relating to early prototype tube transmitters being tested there.

Introduction

An historical account of marine radio communication would not be complete without the story of RCA's radio station "WCC" at Chatham, on Cape Cod. It was a model for all succeeding coastal stations which sprang up during the twenties on both coasts.

Shipboard operators, on watch at sea, have been comforted by "WCC's" booming signal in reply to their feeble calls from deep in the South Indian Ocean or some other remote region of the seven seas. Probably the best known coastal station to early wireless operators, while instrumental in countless distress calls, from vessels foundering as a result of fire aboard, collision, enemy fire and medical emergencies, during the past 65 years.

Since the early days of Marconi's original station at South Wellfleet, in the early 1900's, Cape Cod has proven to be a desirable location for trans-Atlantic and maritime radio stations. Located some 30 miles from the mainland, with water on both sides, remote from industrial interference, it is ideal for radio propagation and reception.

Many early wireless telegraphers got their first taste of Morse code by copying "MCC" at South Wellfleet and later "WCC" at Chatham. Obtaining their commercial tickets, these fellows usually shipped out on some vessel and put in a number of years aboard in order to be eligible for their First class license. Many of them returned to coastal stations like "WCC", after years at sea and settled down to a family life ashore. Many of these professional telegraphers are also Amateur radio operators and are active in this popular hobby.

Numerous technical developments in radio communication as we know it today, are a direct result of the ingenious discoveries made at Chatham and Marion during the early phases of their operation. The improvement in receivers and transmitters during

(Continued Next Page)

1919 Multiple-Tuned Antennas

1919 - June 13th. The Marconi Receiving Site North Chatham, Mass. 350 Ft. Masts Supporting Beverage Long Wage Antenna System.

1925 WCC RCA Station Chatham

1925 - The R.C.A. Radiomarine Station Receiving Site at Chatham, Massachusetts.

1922 Operating Room WCC WIM

1922 - Station "WCC" - "WIM" at Chatnam. Operators (L/R) Robinson and Hovelsrud (Positions 1 & 2. Inspector Callahan at Right. Note Loop Antenna in center.

"Hotel DeGINK" and Operating Station Chatham

"Hotel DeGink" - and the Operating Station of "WCC" at Chatham, Mass

1923 - P/P & Marine Operating Room

1923 - Operating Room at RCA Station Chatham sjpwomg Marine Positions far right; Landwire front center and Point to Point 2nd table left.

1927 - "WCC"

1927 - RCA Station - North Chatham, Mass. Two Operators on duty. Dick Stoddard (L): Ralph Elliott (R)

1934 WCC WIM

1934 - "WCC" - "WIM" Chatham operating room. [L-R] Hollis Fairchild, Forrest Robinson and Thomas Cave. Note original AR-60 Receiver at Fairchild's position. Note plug-in antennas, old Postal Telegraph chairs and 'mills' on stands. Also WU wire table in foreground with Henry Kasten's time stamp for outgoing traffic and WU time clock for incoming traffic. Ancoemt Creed perforator used for QTC lists. Telegraph sounders for monitors.

WCC CHATHAM

the period of 1920 to 1930 was so dramatic that the traffic totals at Chatham increased from several dozen messages a day to over a thousand in a 24 hour period, when 8 or 10 operators were on watch simultaneously. It was not uncommon for one operator to handle 100 messages himself during an 8 hour shift.

History

The dawn of wireless telegraphy communications most certainly begins with the famous Marconi station "CC" at South Wellfleet, on Cape Cod.

From those spectacular beginnings, the model coastal marine ship-to-shore station evolved at Chatham, only 19 years after the first trans-Atlantic message was snet from South Wellfleet.

The Marconi Wireless & Telegraph Company of America secured land on Ryder's Cove at North Chatham and construction by the J.G. White Engineering Co. of New York, commenced in 1914. The brick buildings included the receiving and operations office, the bachelor's hotel and a number of cottages for families of the operaotrs. This complex was used primarily as a listening station, by the Marconi Co. The U.S. Navy took over the station at the outset of World War !. It was returned briefly to the Marconi Co. after the Armistice in November of 1919.

The Radio Corporation of America was formed by the "Big Four" which included: The General Electric Co.; The Westinghouse Electric Co.; The American Telephone & Telegraph Co. and The Wireless Specialty Apparatus Co., respectively. It was incorporated on October 17, 1919.

The four giants pooled their assets, patents and financial support. Radio Corporation took over the assets and properties of the Marconi Co. at the North Chatham site, which had been engaged in receiving messages from Europe in competition with the submarine cable companies who were very active at this time.

The Marconi Co. owned and was operating a large telegraph station at Marion, Massachusetts, on the mainland. At this site were the huge 200 KW Alexanderson alternators devoted to long wavelengths.

The Site

The RCA Marine ship-to-shore communicaiton station is located at the junction of Route #28 and Old Comer's Road in North Chatham, Cape Cod, Massachusetts. The area, on Ryder's Cove, is known to old timers as Chathamport.

The building complex is comprised of six or seven structures including the general office & operating rooms, the bachelor's hotel called "Degink" by the operators, and cottages for the families of the married operators. It was built in 1914 by the J. G. White Engineering Co. of New York, for the Marconi Wireless & Telegraph Co. of America. The old South Wellfleet station was being phased out gradually and this new site was to function as a listening station for European telegraphic traffic. Six massive tubular steel masts were erected in 1914, to support a Multiple-tuned antenna which stretched from North Chatham to Swan River in West Harwich, a distance of nearly 8 miles. These masts were 350 feet high and hollow so that a man could wriggle up inside for maintenance. One of the masts, at the station end, was 365 feet high and 447 feet above sea level. The flashing lights atop it were visible as far as 40 miles at sea by passing ships. The antenna was oriented in an Easterly direction.

In August of 1919, four riggers arrived to dismantle 5 of the 350 foot masts supporting the big antenna. Three more riggers joined them in October, completing the job in November. The masts were then shipped to Tuckerton and New Brunswick, New Jersey, to be erected at the WII and WSC sites.

The 365 foot mast which was a landmark in the area, and a mainstay in communicaiton for RCA, was razed in a spectacular fashion in 1954.

A right-of-way from North Chatham to Marion was cleared and poles erected to support 6 wrought iron wires for keying remotely the transmitters at Marion from Chatham. When the Marion operation was moved to South Chatham in 1948, this right-of-way was abandoned.

As the vertical masts and Multiple-tuned array was discarded in the early twenties this was replaced by the more effective Rhombic antenna systems. Numerous rhombics which were dedicated to particular frequencies and directions were scattered over the approximately 32 acres of the receiving site at North Chatham, on both sides of Old Comer's Road. The transmitter site at South Chatham, is some 72 acres in extent on marshland bordering Nantucket Sound off Forest Beach Road. At this location are more rhombics, "fishbone" and sloping antennas, including a traditional lattice type steel tower 400 feet high.

(Continued on Page 12)

CHATHAM

1934 WCC WIM

1924 - WIM/WCC TRANSMITTER SITE, RCA STATION AT MARION, MASSACHUSETTS.

1948 Transmitter Room WCC

1948 - "WCC" TRANSMITTER SITE, CAPE COD SOUTH CHATHAM, MASS. FRED KREMP - ENGINEER IN CHARGE.

Recollections - Forrest D. Robinson. "RN"

"When I joined the RCA staff of "WCC" Chatham, on March 24th, 1921, there were two circuits in operation. One with "LCM" Norway and two with "POZ" and "OUI" in Berlin and Hanover, Germany. "OUI" took the overflow transmitted traffic from Berlin. The "POZ" circuit had been inaugurated on August 1, 1920 and the "LCM" and "OUI" circuits released to RC New York on November 28, 1921. A large receiving station was completed at Riverhead, on Long Island, about this time which provided reception for these circuits, directly to 64 Broad Street, New York."

"The giant Marion installation, using Alexanderson alternators was in full swing on the long wavelengths, during 1921, and was assigned the call signs "WSO" and "WRQ" for these frequencies."

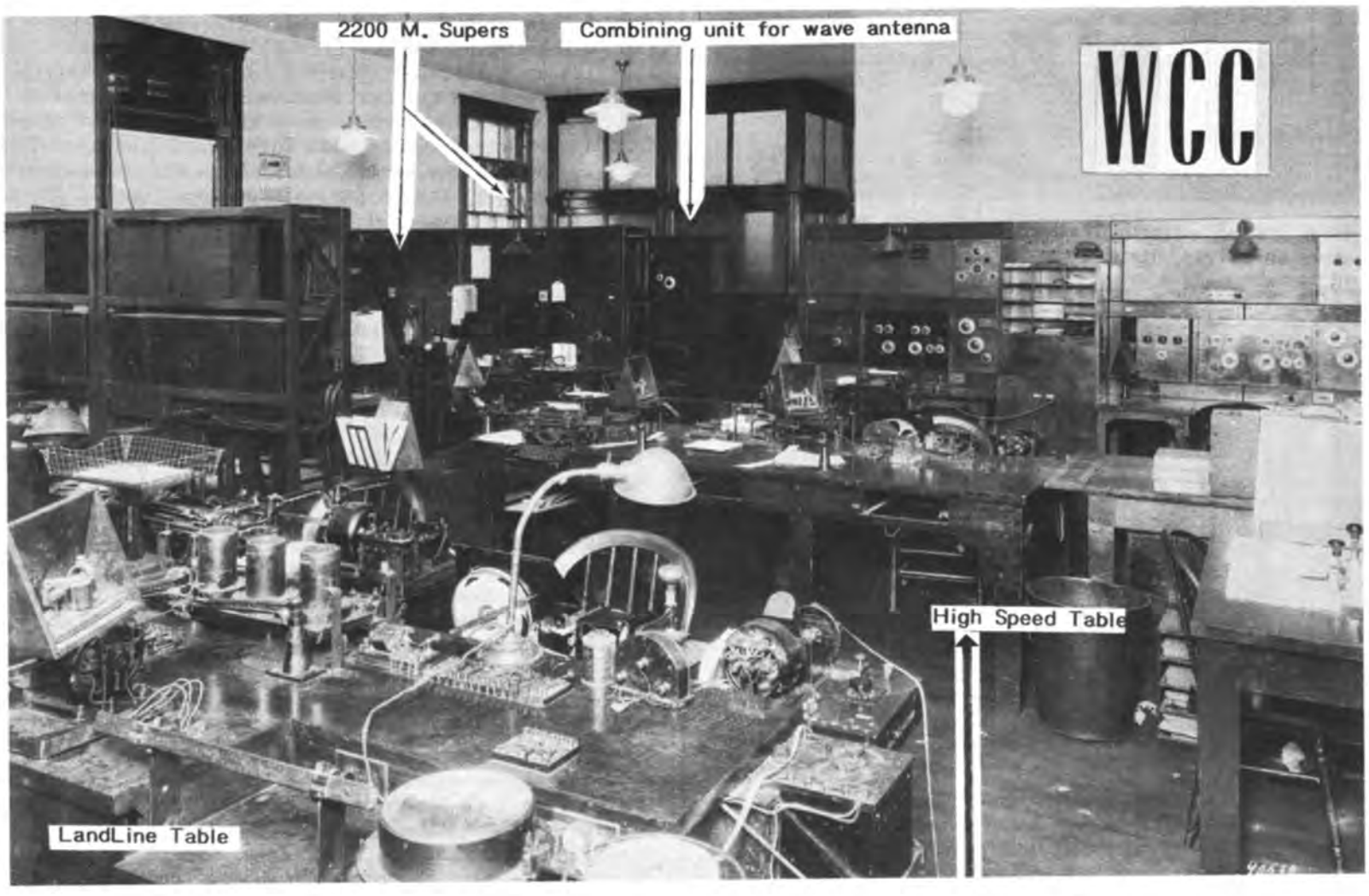
"During this very early development of point-to-point telegraphy operation by RCA, the steamship contracts of the Marconi Company were without c oastal marine telegraph stations. The Engineering staff at Chatham was busily engaged in installing two IP-501-A receivers in shielded cabinets in the room on the left of the alleyway of the station. A Beverage wire antenna, directed to the East, and extending 2 miles was erected, ending this side of a pond on Riverbay Estates. A South Directional antenna was erected over Great Hill, ending near Jake's place. When New York had no further need of their long wave antenna, this was cut to size for marine purposes. Two transmitters were constructed and installed at Marion, for our use, and controlled from Chatham. These were new tube transmitters and licensed to operate on 2200 and 2300 meters with the call sign "WCC" and keyed from Chatham."

"On April 13th, 1921, Thomas M. Stevens arrived with a Government Inspector regarding a license to open up for commercial traffic. There were a number of ships using 2100 meters as a calling frequency and the working frequencies went from 2150 to 1875 meters."

"In those early days when "WCC" first opened up for marine traffic it was sometimes necessary to QSV for 15 minutes in order to allow the ship operator to tune us in. You can imagine the problem it caused when several or more ships called with traffic. During the mid 1920's a press service, sending news to ships at sea, was once again put into operation, following the original example set by "MCC" South Wellfleet Marconi station. Many old time brass pounders copied their first press from "MCC" while learning the code. In the early 30's this press service was taken over by Radio Central, New York and transmitted direct over the "WII" alternator at New Brunswick. Later "WSC" took over this service using the high frequencies."

(Continued on Page 36)

WCC - Worked Around the World



1927 - "WCC", Chatham, Mass. R.C.A. Receiving Station showing station layout with the various components as indicated.

(Continued from Page 12)

On September 1st, 1921, R.C.A. took over all the stations of the International Telegraph Company. Siasconset "WSC", on Nantucket, was closed on 1201 AM on that date. Siasconset was re-opened on January 2nd, 1922, as were many other coastal stations, but the eastward bound traffic was controlled by Chatham. As marine traffic increased during 1921, a Marine Information Bureau (MIB) was set up at 64 Broad Street, New York, staffed around the clock to handle routings and deliveries of this class traffic, to it's New York customers."

"WCC" also handled all the Cape May ("WCY") traffic both ways along hte "WSC" file. These stations used the 1620 meter wavelength for this purpose. After much experimental testing, a 600 meter transmitter was finally put on the air at Chatham, using the call "WIM". "WSC" at Siasconset, on Nantucket, was closed October 1st, 1923 and the call re-assigned to Tuckerton, New Jersey. When Tuckerton got into operation, "WCY" Cape May was closed down."

"WCC" pioneered in giving free medical advice to ships without doctors, through the U.S. Public Health Servide hospitals."

"The Radio Marine Corporation of America was set up with RCA taking over the Independent Wireless Telegraph Company, on January 1st, 1928 and continued to do so until August 31st, 1956, when coastal stations came under RCA Communications Incorporated."

"During the second World War from 1942-1945, the U.S. Navy took over the operation of "WCC" Chatham."

"The Wireless Age" June 1921

"Two new Coastal stations for ship-to-shore communication, employing tube transmitters, have recently been put into service, by the Radio Corporation of America. One is located at Chatham, Massachusetts, on Cape Cod. The call letters are "WCC" and the wavelength 2200 meters. The other station is "WNY" with it's transmitter located at Belmar, New Jersey, using wavelengths of 300,425 and 600 meters respectively. Both stations are of the most modern throughout, being tube transmitters of 2KW capacity each. The tube transmitter marks a distinct advance in the state of commercial radio telegraphy."

"These new stations have been located to the best advantage geographically and will afford greatly increased facilities to all ships engaged in the European and Southern maritime routes. The normal range of these stations is 500 miles during daylight hours."

"The equipment at the Cape Cod station, in addition to the 2KW tube set, for ship to shore work, will later include a tube set of 5KW capacity, the most powerful tube set so far developed, for coastal maritime service. The range of the larger

(Continued on Page 14)

1958 WCC Operating Crew

WCC - 1958 - Operating room at Chatham, Mass. Picture from M.D. "Bud" Hall Collection. Names of Operators not indicated.

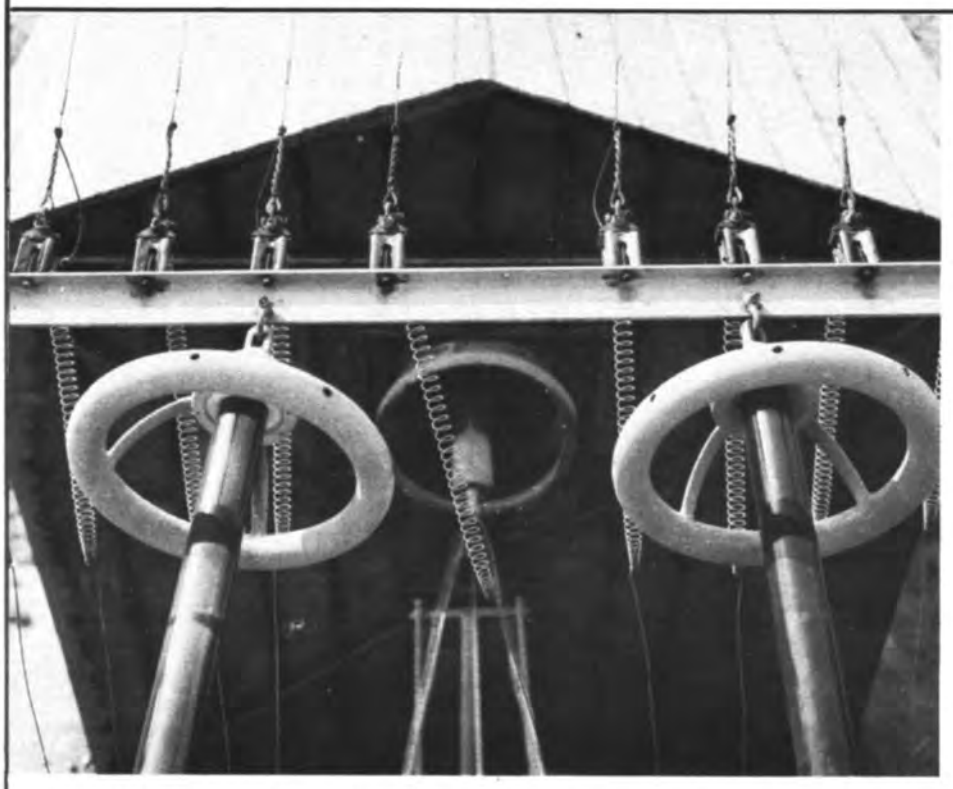
1927 WCC WIM

WCC - Chatham - July 1927. Taken by T.C. Knight for R.C.A. Furnished by Ed Hammon. [Names not listed]

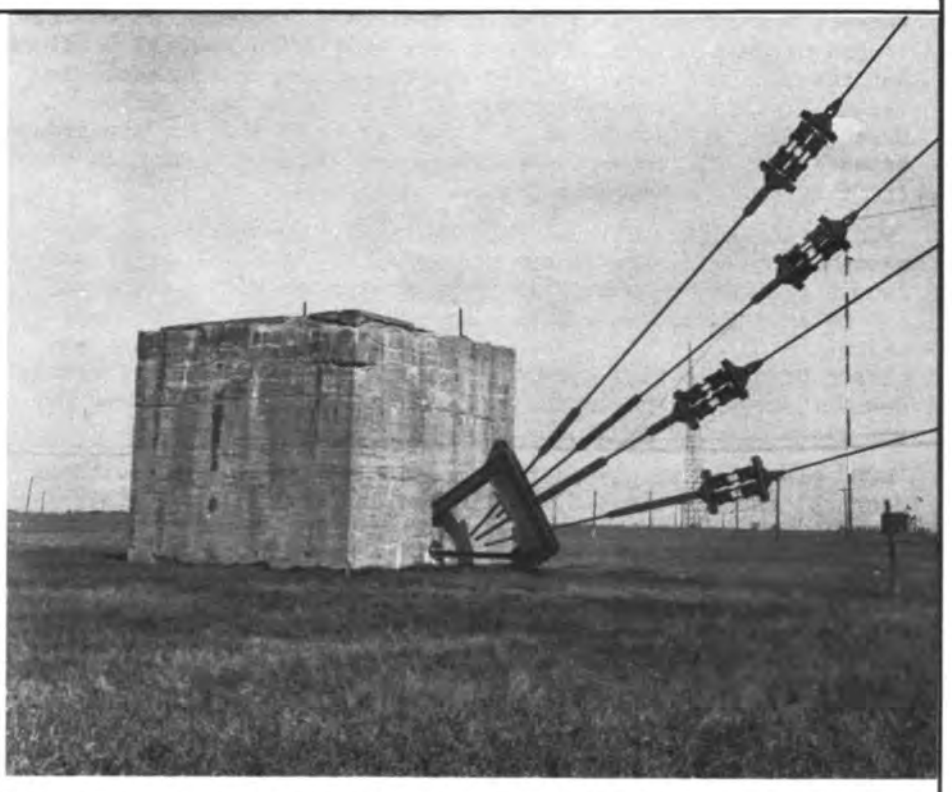
1948 "WCC" Crew and Receiving Station

This picture taken by Thomas Coke Knight for Radio Corporation of American was furnished to us by member Ed Hammon. Pictured at left is Andy Ringheim, Matt Tierney, Fred Heiser [Then Manager] and Hans Hilken. Across from Hans with his face partially hidden is Malcom MacDonald, then Al Snow, Dick Lorraine [who was appointed Manager after Fred Heiser passed away]. Hammons can not identify the operator sitting at the last position. On the far right is operator-clerk, Howard Quinn. WCC Receiving Station - 1948

R.C.A's Marion Transmitting Station "WIM-WCC"

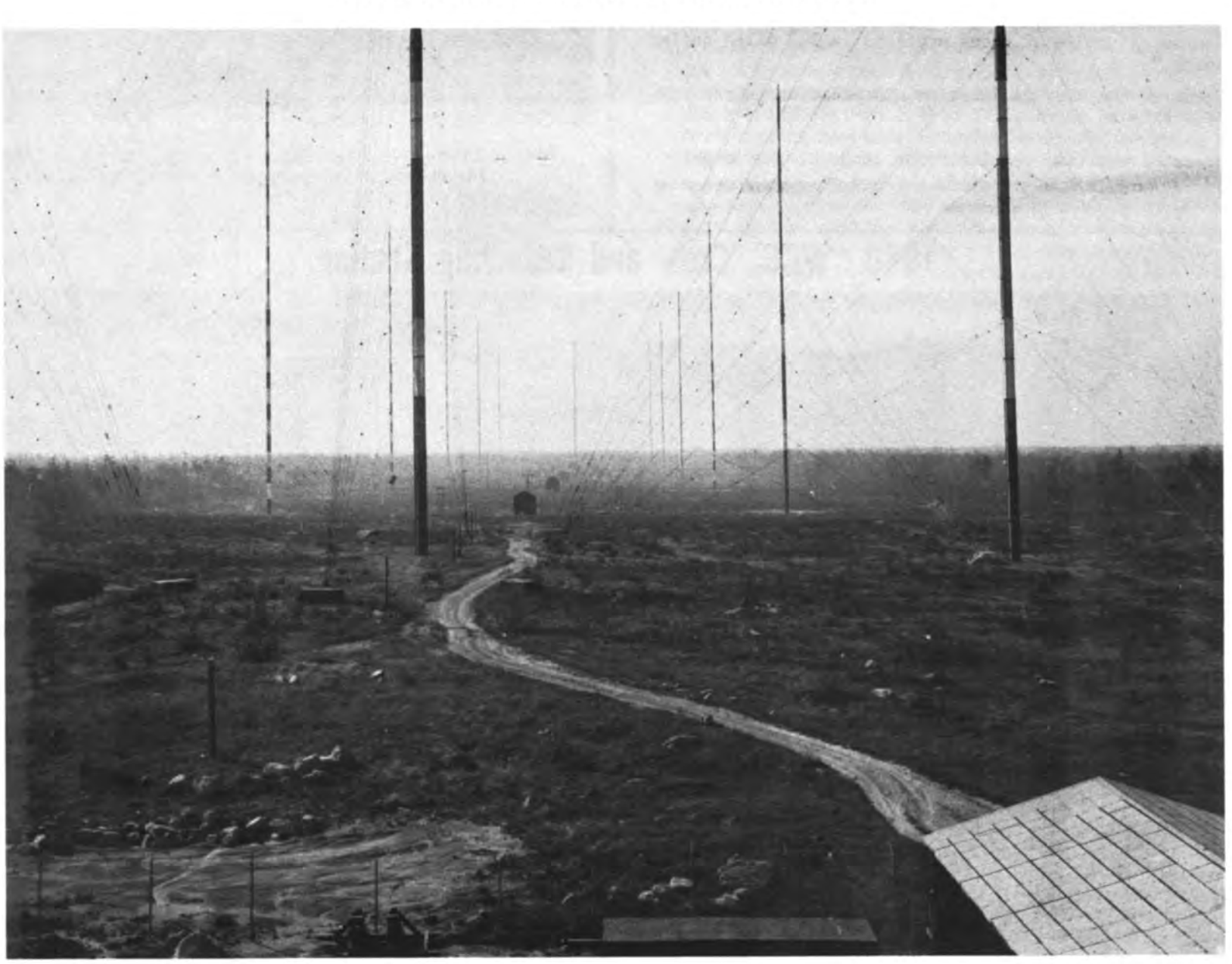


The first tuning-house from the Marion Transmitter Station, showing insulators with their corona rings which feed to the aerial and connection through a large copper sleeve, into the tuning house. The rings are about two feet in diameter and the insulators are about five feet long, This picture furnished by Lincoln A. "Linc" Cundall who became a Silent Key Jan. 21 1985. "Linc" was Treasurer for AWA circa 1973 (and many years).



These hugh blocks of concrete were used to anchor the guy wires and weighed many hundred tons each. Approximately half of the weight was below ground with a heigth of about 20 feet showing. Four main guy wireless were anchored to the concrete blocks. Each strain insulator is approximately seven feet long and weighs close to one-half ton each. Close inspection of the construction shows that each insulator has four circular blocks, which are glass and are mounted under compression. This picture was furnished by "Linc" Cundall former SOWP Member and who became a Silent Key" on Jan. 21 1985.

RCA's ANTENNA FARM AT MARION MASS.



The Aerial system at Marion, Mass. These 300-foot tubular steel towers support a 24-wire horizontal directive antennass which are over 5,000 feet long. Tuning houses, similar to those at Tuckertwon, are located along the length of the aerial. This station was set up originally to transmit to Stavanger, Norway. The receiving station was located at Chatham, Mass. and received from Naerboe, Norway. An extensive radial ground system of copper wires is embedded in the ground under the aerial. Gaps in the ground wires have set fires in the peat-like earth in the past from excessive power used. On either side of each tuning house are frames that support a pulley and concrete counter weight arrangement for keeping wires to the tuning houses taunt. The system was set up by british Marconi in 1913, like the German scheme, was to be a part of a world-wide Wireless Empire. Pictures from the Lincoln A. Cundall collection furnished before his death.

WCC - Early "Seventies"

CHATHAMPORT RECEIVING STATION –
Taken in the 'early' 1970's by Dick Kelsey and furnished by Ed Hammons. ID: George Smith at far left,, Mel Carver, Bob Dalton and (?) Leif Karlsen just visible along edge of traffic rack. On the opposite side in back is Operator-Clerk Bill Lorraine. . Hammons (?) standing behind Andy Ringheim who is sitting at the old 500 KHz Psn.

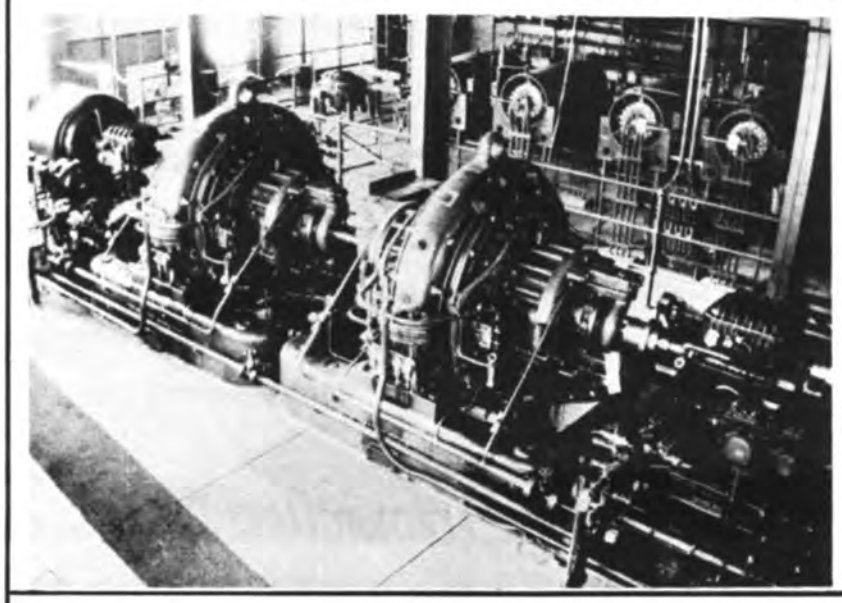
Adm. Byrd RSO 1927

TO
WCC - CHATHAM, MASS - RCA

YOU ARE THE FIRST STATION I HAVE
RAISED . HR HR HR WTW Q S R
VIA RCA TO RADIO TRAF N Y
RODMAN WANAMAKER —
HALF WAY BETWEEN CAPE COD AND
YARMOUTH . OUT OF SIGHT OF LAND .
WEATHER CLEARING SLIGHTLY .
EXTRA CANS GAS CAUSING TROUBLE
WITH COMPASSES . HOPE THEY WI LL
Be O K WHEN THROW EMPTY CANS
OVER BOARD . — SIG BYRD

This is the last of a 'picture copy' of a transmission received from Admiral Byrd on one of his expeditions to the South Pole. It was handled in 1927 by W.C.C. Thos. Coke Knight Photographer, released by R.C.A. and furnished by Member Ed Hammons. Nostalgic Memento of days long ago... the "Golden Era".

Alexanderson Alternator WRQ WSO Marion, Mass.



WSO-WRQ – 1921
Alexanderson Alternator for Long Wave Trasnmission was installed at Marion, Massuchusetts. Sept. 1 1921 RCA took over all ITT Stations including WSC Siasconset and Cape May which WCC (assigned) handled calls of 1620. WSC was assigned Tuckerton Oct. 1 1923 and WCY was closed down also. Marion was abandoned in 1948 and Transmitters moved to South Chatham, Mass. . Picture is from M.D. Hall collection.

Vine Covered Receiving Station of "WCC" Chatham - 1948

Few Stations Have Exceeded its Marine Traffic Volume

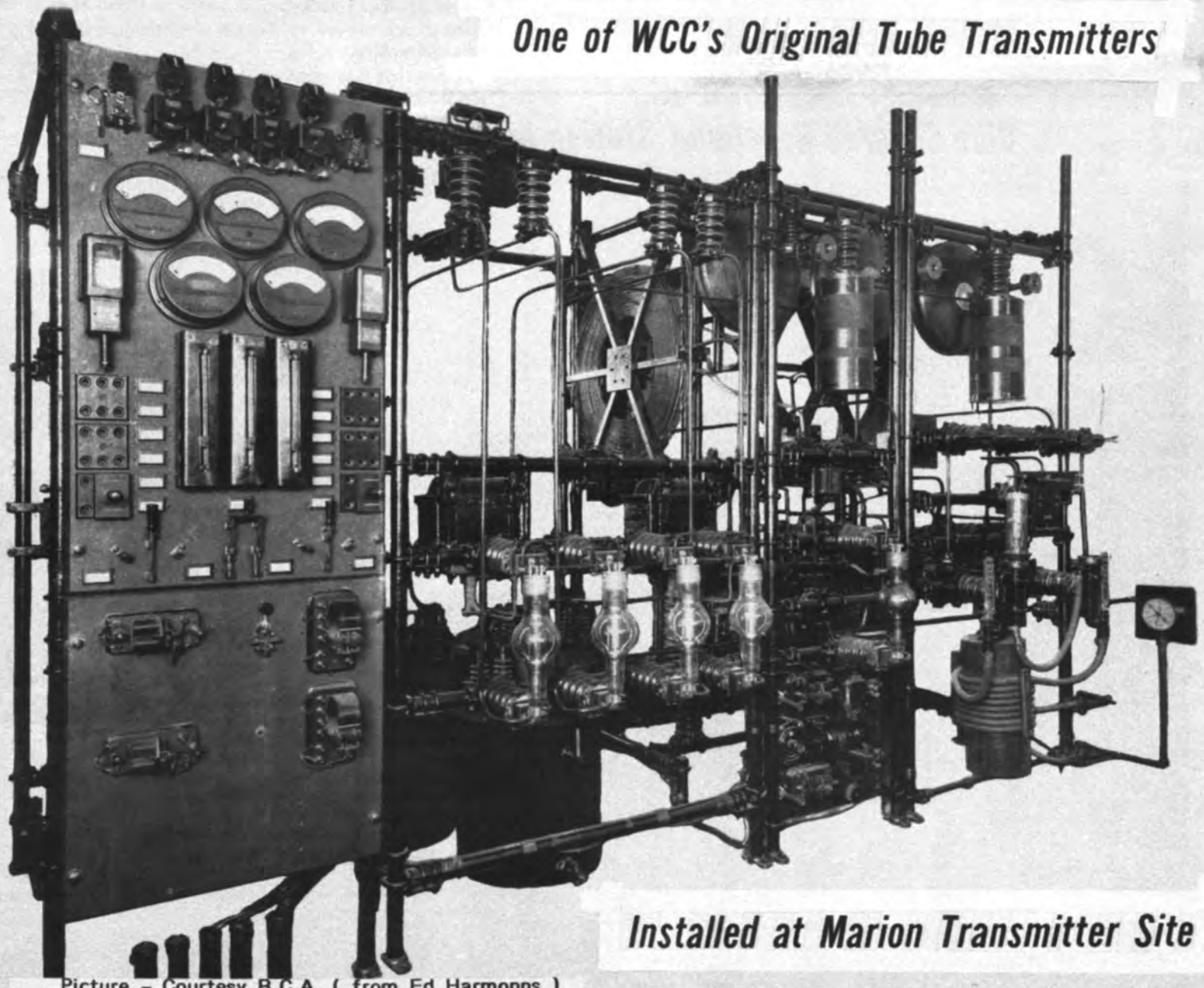
Back to Index

1980's WCC Pictures By Doug Brunell

Bill Ryder, Engineer pointing out some of the transmitter sites and equipment on the South Chatham WCC transmitter farm located on 72 acres of salt marsh. Picture taken in 1980 by Doug Brunell.

Bill Ryder at Transmitter Control Panel of WCC. Picture by Doug Brunell taken in 1980

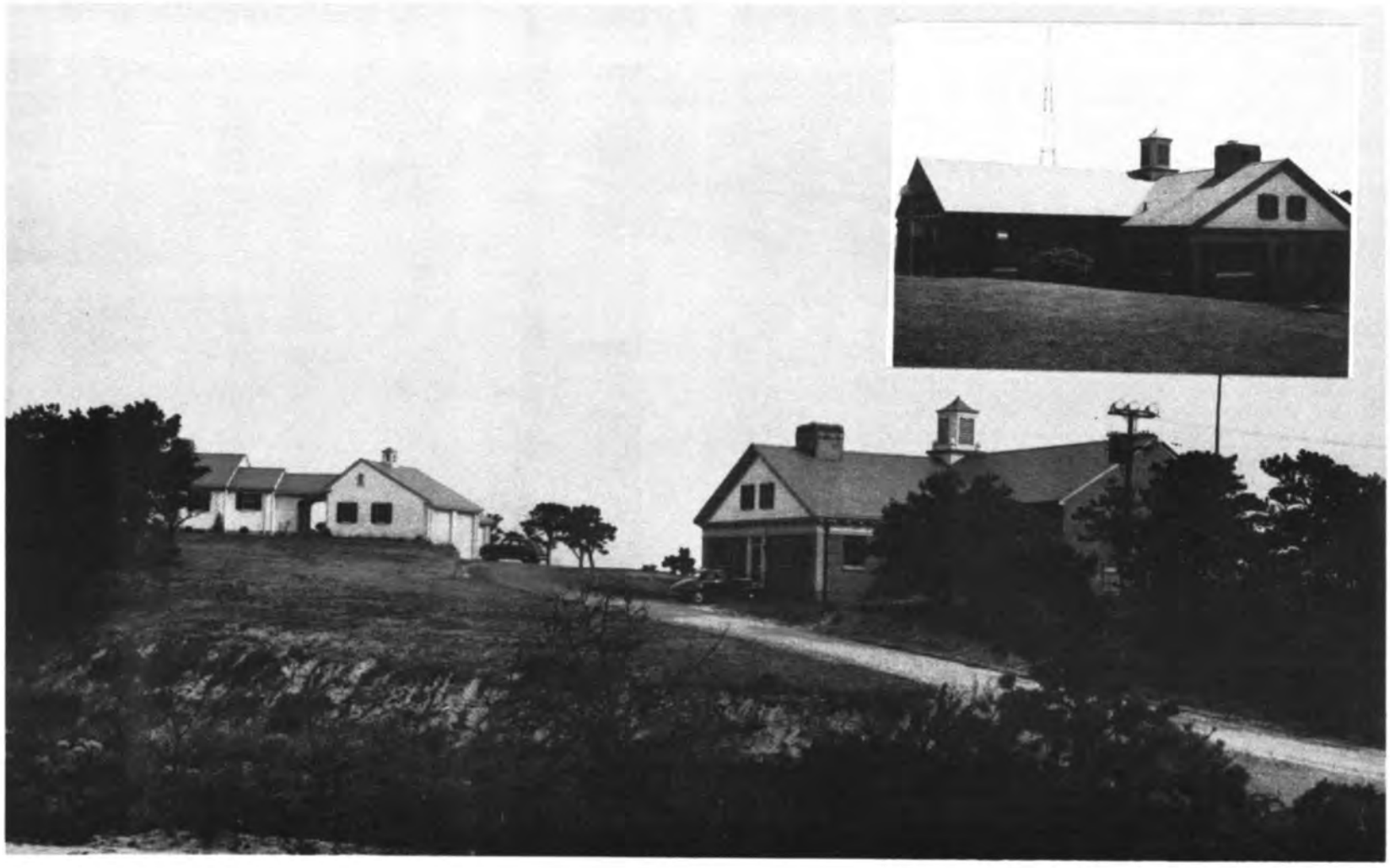
One of WCC's Original Tube Transmitters



Installed at Marion Transmitter Site

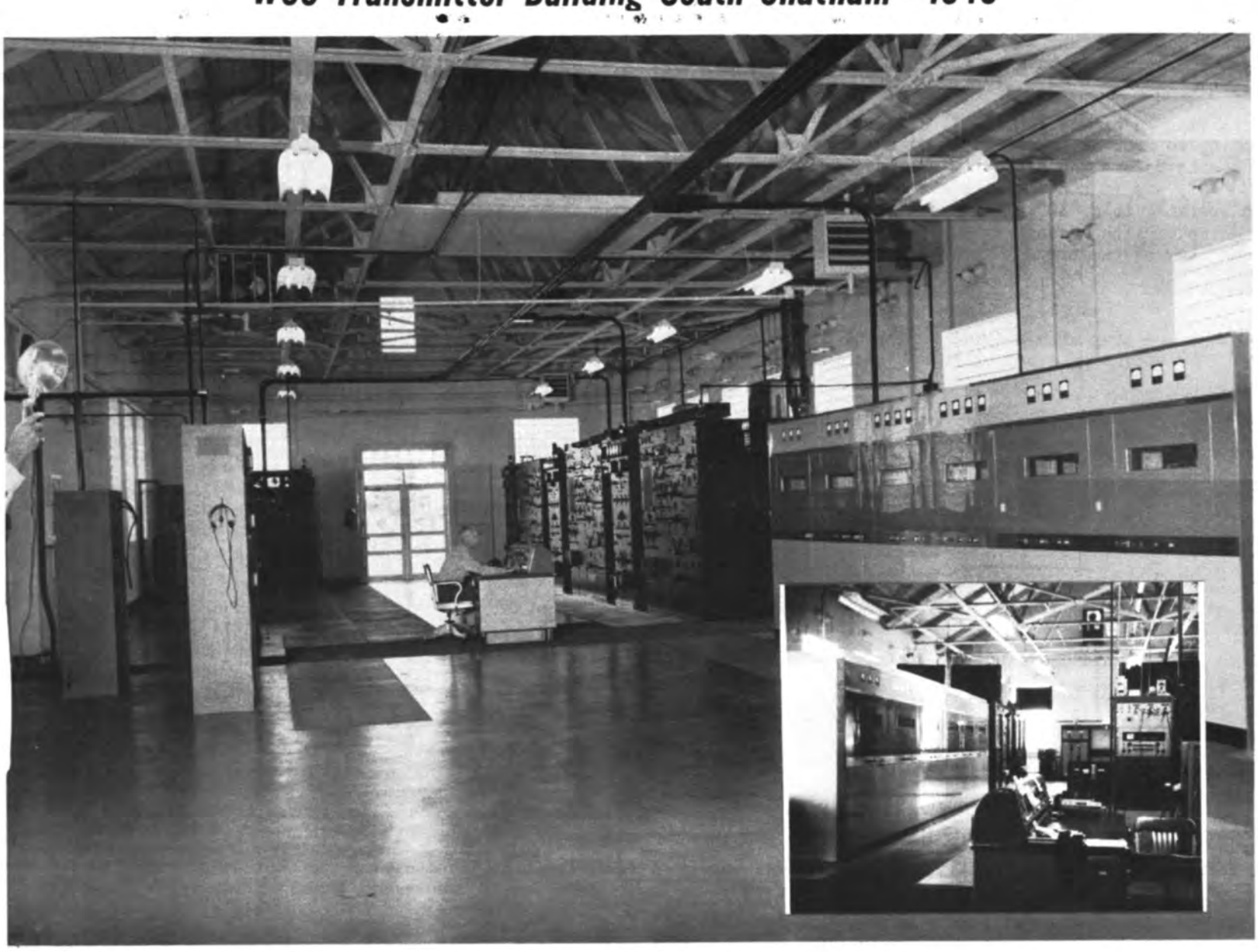
Picture – Courtesy R.C.A. (from Ed Harmonns)

View South Chatham Transmitter Building on Right



SOUTH CHATHAM TRANSMITTER SITE. Buildings at right house transmitters including those moved from Marion in 1948 when the Marion site was abandoned. Left will be seen the Company owned cottage and garage for one of the Transmitter Technicians. Large picture from RCA collection and furnished by Ed Hammons. INSERT At upper right: Picture of Transmitter building from the Northeast side taken on July 1 1980 and furnished by Bill Ryder

WCC Transmitter Building South Chatham - 1948



The Transmitter Building at South Chatham is located on a 72 acre plot, mostly marshland bordering Nantucket Sound off Forest Beach Road. At this location are rhombics, "fishbone" and sloping antennas, including traditional lattice type steel tower 400 feet high. This large picture was taken in 1948 and is taken from the rear looking toward the front door. Picture from the RCA collection and furnished by Ed Hammons. The smaller insert at bottom right was taken July 1 1980 and shows considerable more equipment over the years. It was taken from the opposite end of the building. Picture is from the collection of Bill Ryder. In the larger picture, Frank Kremp is shown at desk control unit in center.

Chatham - 'WCC' Story - Continued

set will be 1500 miles and will take up the work formerly done, before the War, by the old Cape Cod station "MCC" at South Well-FLEET. This station will be used for ship-to-shore message work, broadcasting traffic on regular schedules and will also transmit press on regular schedules, on a wavelength in the neighborhood of 3000 meters, in connection with the "Ocean Wireless News", the daily newspaper of the sea."

"These new stations of the Radio Corporation of America will be connected by direct wires to the Main Traffic office at 64 Broad St. in New York, from which point, the trans-oceanic stations of the Radio Corporation are also controlled."

"The three new tube sets, the first to be used in ship-to-shore work, are built upon iron frameworks, 7 feet in height, 32 inches wide and 36 inches deep. Three panels of dilecto provide mountings for the necessary control switches and indicating instruments. Two Pliotron tubes are used in the set, in a vertical position, each tube being capable of 1KW capacity and 2.5KW in the case of the 5KW transmitter. The latter tubes are the largest built for commercial use, so far. These sets are designed to work on a line voltage of 220 volts at 60 cycles, single phase. In the larger set, the HV will be stepped up to 25,000 volts in the plate transformer, which has a split secondary, each tube operating at 12,500 volts each. A self rectifying circuit, developed by RCA Engineers, is employed, operating as Oscillators & Rectifiers simultaneously."

Historical Events

1926

"WCC" Chatham was instrumental in communicating with the British freighter "Antinoe" when it was sinking. As a result, Leslie H. Strong, who was on watch on the circuit at the time, was decorated by the British government.

1928-30 1933-35

Chatham communicated with the Byrd Antarctic Expedition on numerous occasions while they were at the South Pole.

1931

During the epic round the world flight of Charles Lindbergh and his wife Anne, who operated the radio aboard the plane, "WCC" was in frequent contact with them. Mrs. Lindbergh had learned to operate Morse telegraph expressly for this historic flight and she often mentioned the patience of Chatham operators. Forrest Robinson "RN" said she was a fair operator but with "savvy" and he didn't have to tell her anything twice.

1937

In the early evening of May 7th, 1937, dirigible Hindenberg was attempting to moor at Lakehurst Naval Air Station in New Jersey. Moments before the dirigible exploded in flames, Francis Doane, "XD", was in contact with the ship from WCC Chatham. The German operator told "XD" all was well as he cranked up the dirigible antenna. The message was relayed by WCC to Germany and when the news of the tragedy reached them, they refused to believe it.

1938

RCA Chatham communicates with the expedition of Sir Hubert Wilkens which is exploring a passage under the ice at the North Pole.

Howard Hughes is in contact with WCC during his history making flight around the world.

On September 22, 1938, a murderous hurricane strikes New England from the South, wreaking havoc in the Buzzards Bay and Cape Cod canal area. Winds of well over 100 M.P.H. coupled with extremely high tides swept away homes and small craft like toothpicks.

The 6 wire keying link between Chatham and Marion was disrupted when 40 or more supporting poles are up-rooted severing the link.

As a result, Chatham instituted a point-to-point radio circuit with "WNY" New York to handle the mass of traffic. All other means of communication were out, due to the hurricane, normal circuits were restored after October 1st.

The "Santa Maria" Saga

The New York Herald Tribune for February 9th, 9161, dateline Chathamport, Mass. carried this intriguing feature story about R.C.A. Marine radio station "WCC" and it's most senior radio operator, Forrest D. Robinson, Francis Doane and Albert Snow.

"The dot and dash of the Morse code are far from a thing of the past, but it has taken a case of piracy on the high seas to remind most people of this."

"It was through a small brick building, near a cranberry bog here, that the rest of the world kept in touch with the Portuguese liner Santa Maria, seized by rebels, while it was dodging through the South Atlantic during most of the last two weeks. And it was done by means of the old reliable International Morse Code which, in this age of planning for satellite relay of telephone and television, many people regard as something of the past."

The "New Look" at WCC. This picture taken in 1980 shows Ralph Siebert (K1TV) at his working position. His smile denotes pleasure with his work (or) was it hot news about a raise ?

More of the "New Look" at WCC. Cloistered within these cubicles (L/R) Ron Farris"RF"; Ralph Siebert "SR" and Opr./Clerk Dave Fulcher - back visible through doorway. Date - 1980.

"The small brick building is part of Chatham Radio, a commercial marine radio-telegraph station whose roots go all the way back to Guglielmo Marconi. Through the years its name has popped into newspapers when disasters and various adventures occurred on the foaming waves, not only of the Atlantic but of the other six seas. It came back into print January 24th when the Santa Maria's radio operator called Chatham Radio soon after midnight. From then until last Sunday night, the ship and the station exchanged 111 messages. Another 100 are waiting at the station to be sent to the ship, but the Santa Maria hasn't responded to Chatham Radio's call."

"For all its importance as a funnel of news, Chatham Radio is not much more distinguished looking than the cranberry bog. The station consists of a cluster of small buildings near the ocean, three miles from Chatham. The big antennae that shoot its messages out to sea are several miles away at South Chatham. If you imagine Cape Cod as a flexed arm, Chatham Radio sits right on the point of the elbow."

"The station is the strongest in the marine system of RCA Communications Inc. Although other RCA stations are closer to South America, Chatham Radio had "worked" the Santa Maria across the Atlantic from Portugal into Caracas, Venezuela, where the Portuguese insurgents boarded the ship as passengers."

"While the ship was being seized at sea by the insurgents, operators at Chatham Radio periodically tapped out the dots and dashes that spell the ships call letters CSAL, in order to send the ship routine messages. There was no response from the Santa Maria, but a West Indian station told the operators on Cape Cod "something is wrong" with the ship."

"Albert E. Snow, one of the Chatham operators, called the ship through the evening on January 23rd, until his trick ended, at midnight. Then Francis Doane came onduty and continued the calls. At 12:18am, the Santa Maria replied and told Mr. Doane to go ahead with the messages."

"Throught the rest of the week, about 8,000 words were exchanged with the ship. This no more than routine work for the station represented the chief link between the U.S. and the liner. As a consequence, the men at the station, whose ears are tuned to nothing more startling than the click-clack of telegraph keys and the sighing of the wind in the pines outside were driven half crazy by telephone calls from all over the country."

(Continued on Page 19)

OCTOBER 1966

WCC

Ralph Siebert (SR)
Front.

Jim Richards (RS)
Middle

Bill Farris (WF)
Technician (Back)

OCTOBER 1966

WCC

Forrest Henry (FH)
Operator - Clerk

Editorial Comment

Over a period of 18 years we have received quite a bit of memorabilia about Marconi's early station at Wellfleet and the transition to the present Chatham station with Call - WCC.

Most of this material was placed in a "Wellfleet" File with the intention of drawing on it for a story about this early station. Among the clipping and stories were quite a few pictures, some good but many of very poor quality. Many of them did not carry the name of their doners, hence in using them at this late date, it is almost impossible for us to give credit to those who actually sent the material.

I do recall the following who sent material and I do wish to give each a mention as having a part in working up this part of the Journal.

To start with, I would like to mention Fred Rosebury who was the Society's Assistant Editor and who took the initiative some years back to try and assemble material for a good story on this important record of wireless history. Fred has given liberally of his time and talent to assemble considerable material, some included in the foregoing pages.

I would like to mention the name of Ed Hammons who has sent us quite a number of pictures over the years, mostly from R.C.A. Public Relations Department. Other who have contributed in a large way include GEORGE X.M. COLLIER; LESTER BACHMAN: BARNEY ZWEIG, M.J. OLIVER, M.D."BUD" HALL: BILL RYDER: IRV FINVER: : RALPH G. SIEBERT: WILLIAM WALLACE WYLLIE: E.P. LOUR.
Thanks one and all, and let me take a lesson from the book of experience, to mark every photograph and piece of paper received with the name, address, date and details so that in years to come such items can be properly identified and proper credit given when used.

While the foregoing copy furnished by M.D. "Bud " Hall has covered Story of Chatham given an outstanding and interesting report on the history of this now famous station, I am also using material submitted by Bill Ryder which, while it covers the same subject, mentions many things not touched on in the first part; hence they compliment each other.

I had hoped to publish the contents of a booklet written by John V. Hinshaw and copyrighted by the Chatham Press, Inc. in 1969. Attempt to reach Chatham Press failed as my letter was returned by the Post Office. Had I been able to publish this account of Wellfleet, the pictures furnished by Mr. Collier would have supplemented and complimented the material in Mr. Hinshaw's story. Perhaps some other time we can complete necessary arrangements on the Wellfleet story which is quite important, historically.

Thanks to one and all who have furnished material, used or unused. It all is valuable for reference and possible future use if it does not appear in this issue.

William A. Breniman - Editor.

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"This last week was the most frantic in the stations long history, although operators here at one time or another have been the sole contact with ships, planes or explorers camps, that were in the eyes of the world."

** Mr. Forrest D. Robinson was honored by the Commonwealth of Massachusetts for his forty years of service as a radio-telegrapher at Chatham, upon his retirement from "WCC" April 3, 1961.

Transmitters & Receivers 1921-1950

RECEIVERS:

IP-501A SE-1492
CRN-R6A
AR-60
AR-77 540 Khz - 31 Mhz
AR-88
RMCA-8500; 8503; 8504

TRANSMITTERS:

Alexanderson Alternators Marion
EARLY 2 Pliotron Tube 1 & 2 KW tube
2 UV-207's MOPA at Marion in 1932 ("Airport" prototype)

Operators Sine List Amateur Calls SOWP

PP UV 204's MOPA 500 - 600 & 740 KHZ
At Chathamport signing "WCM" with the fishing fleet.

CIRCA ET-8017
1928-38 ET-3656 CW Transmitter 1 KW 15-50 Meters
UX-211 Xtal Osc.-UX-860 Doubler
2 UV-861's PP Final

** "WCM" was the 500/436 Khz auxiliary transmitter after "WIM" moved to Marion. The long wave "WIM" transmitter at Chathamport caused great interference with the higher frequencies being used, due to the harmonics, therefore was remoted to Marion.

CHATHAM - MARION, MASSACHUSETTS
OPERATORS LIST

NAME	SINE	AMATEUR CALL	S.O.W.P.
Roland Archibald	"RA"		
Clyde Backus	"BA"		
Francis Bearse	"FB"		
Fred Becker	"BF"	W1ZH	3963-P
Lyman Byam	"LB"	W1TY	2116-S
Joseph Carson	"CN"	W1UJ	
Thomas B. Cave	"CB"	W1US	
Al Chesbro	"AL"	W1BMW	
Everett Davis	"GX"		
S. N. DiLorenzo	"LZ"	W1bel	
Francis C. Doane	"XD"	W1FZT	3015-P
Alfred Donato	"AD"		
Johnny Eldredge	"ED"		
Ralph Elliott	"ET"		
Hollis Fairchild	"FD"		
William Fishback	"FK"	W1JE	
Sam Freedman	"SF"		
Thomas Galbraith	"TG"		
Ralph Gleason	"CA"		
Fred Heiser	"HR"		
Paul Karr	"KR"		
Fred Kremp	"KP"		
J. R. Lorraine	"DL"	W1JNI	
Malcolm J. MacDonald	"MD"	W1AXF	2185-P
Gordon Macintosh	"MI"		
Arch MacLean	"ML"	W1VO/2MY	
Lewis Lerriwether	"LM"		
Bill Minners	"BM"		
Clarence Reeves	"RV"		
Forrest D. Robinson	"RN"		
Bill Ryder	"WR"	W1KL	3447-P
John F. Smith	"JS"	N2DHW	
Albert Snow	"SU"	W1RZ	
Robert Steadman	"SM"	AA1J	215-S
Dick Stoddard	"RS"		
Leslie Strong	"LS"		
Matthew Charles Tierney	"MC"	Was at "SC" with Sarnoff	
Richard Upham	"BU"		
Hatton Wilks	"WS"	W2BC	
Malcolm McDonald	"MC"	W1AXF	

OPERATORS LIST
CURRENTLY OPERATING AT "WCC"

NAME	SINE	AMATEUR CALL	S.O.W.P.
Leon H. Baumlin	"LB"	W1DGB	184-V
Walter Doucette	"WD"	N1AVT	3520-V
W.M.E. Pyne	"BP"	W1SCD	3710-M
James E. Richards	"JR"	K1GRM	2676-M
Ralph Siebert	"RS"	K1TV	2772-M

** Edgar C. Hammons - 1417-V SK
Was Chop and General Manager of "WCC" Chatham for many years and assembled a great portion of the information and photographs herein, until his untimely passing in December of 1984.

The 'WCC' Story

BY - WILLIAM C. "BILL" RYDER

There could be some controversy as to which was the first wireless/radio station in the United States, just as there could be some doubt about who "invented" radio. Most people will put Marconi as the inventor because they don't know about his forerunners:Maxwell, Hertz, Lodge, Branly, Braun, Alexanderson, De Forest and many others who did pioneering work. All honor and credit is certainly due to Marconi for having had the vision to see at an early date the broad commercial implications of wireless for which the basic scientific principles had been there for him to know when he was but a youngster, through the books and papers of investigators of electromagnetic waves and related subjects, of which there was a large body all through the nineteenth century and even earlier.

Like almost all great inventions and discoveries, no one person "invented" wireless.

In any event, there can be no denial that the station we know as WCC on Cape Cod is surely the direct descendant of one of the first great efforts in the New World, the brainchild of Senor Guglielmo Marconi. That was "CC," the station he caused to be erected at South Wellfleet, thirty miles east of the present WCC. (See material from "Cape Cod Historical Guide, Vol.1," also "A Technical History of Marconi's South Wellfleet Wireless Station, 1901-1922," by E. P. Lohr. These historical documents were gathered and supplied to the Society by Barney J. Zweig, SOWP member 3236-P).

Marconi's first station at South Wellfleet had a circular arrangement of towers which was destroyed in a great gale right after the turn of the century. Without much delay Marconi's people erected a four-tower system in 1902. The equipment was installed in special buildings and the station began operating in January, 1903, continuing in use until 1917. As it became evident that the Atlantic Ocean was eroding the cliff at the rate of three feet each year, thus threatening the easternmost towers with collapse, the station's end was inevitable. The United States Navy took it over during World War One. Up to that time, however, successive inventions had made the sparkgap transmission obsolete. The station was never reopened after the war and was scrapped in 1920.

Before the government had taken over the station, in order to continue his operations and experiments, Marconi erected a new receiving station at Chathamport on the Bay side of the Cape, three miles from the town of Chatham, and a new transmitting station was built was built at Marion, near where the Cape joins the mainland.

In 1919, after the war's end, the government returned the property to the Marconi Company. During that year the Radio Corporation of America (RCA, incorporated October 17, 1919) was formed by a consortium of General Electric Company, Westinghouse Electric & Manufacturing Company, and associated companies. They purchased the assets of the Marconi Company of America in the interest of developing an all-American worldwide radiotelegraph communication system.

For the first two years under RCA ownership, Chatham was a point-to-point station, transmitting messages to Germany, Norway and Sweden. Then in 1921, as plans were made to transfer all point-to-point activities to the newly-built Radio Central on Long Island, New York, the Company installed a 500 kc transmitter with the call letters WCC in the receiving station at Chathamport to serve as a ship-to-shore link. This was supplemented a year later with a second WCC transmitter designed to operate on 2200 meters, a wavelength thought at the time to be ideal for long-range communication. The 500 kc (600 meter) transmitter then assumed the call letters WIM.

However, with the addition of the 2200-meter equipment, interference problems increased. At that time wireless apparatus (beginning to be known as radio) was relatively crude in comparison with later standards. To eliminate transmitter interference at the increasingly busy receiving positions, there was a necessity to remove the transmitting gear a considerable distance from the receiving antennas. Accordingly, WCC's transmitters were moved to Marion. Overland wires were leased to connect the transmitters with the operators' keys at Chatham. This arrangement worked satisfactorily during placid days on the Cape, but with the coming of winter storms, operations were sometimes interrupted by ice formations and by falling trees which severed the wires. On these occasions crews were rushed from both ends of the circuit to find the trouble and reconnect the wires.

Old timers still at Chatham in 1949 recall the emergency they faced in 1927 when the Prince of Wales (afterwards the abdicated King Edward VIII) was aboard the British liner SS BERENGARIA. At an hour when message traffic to and from the ship was at its peak, a windstorm broke connections in several places between Chatham and Marion. With 300 urgent radio messages waiting to be sent to the vessel, one of the crack operators, carrying his telegraph key, set out through the gusty night, feeling his way in the dark from pole to pole until he spotted the break nearest Marion. He connected his key into the line and proceeded to operate the Marion station transmitter until the last of the messages had reached the BERENGARIA.

With the advent of short waves (with which the amateur radio fraternity had been successfully experimenting for a long time) and the consequent spanning of greater distances, message volume at WCC increased rapidly, and it was essential that interruptions to service be eliminated. To insure this, RCA engineers in 1937 designed and installed a microwave beam system over which the transmitters at Marion were radio controlled from Chathamport, replacing the long overland control wires.

(Continued on Page 21)

PICTURE CREDITS

Photographs at top were taken by "Bill" Ryder, SOWP-3477-P W1KL in July 1980. They identify as follows:

(1) South of Transmitter Building at WCC, looking east toward Harding's Beach. H/F transmission lines and antenna supports on the marsh.

(2) South of transmitter building looking down transmission linestoward M/F tower.

(3) East of transmitter building looking southeast, sail-boats visible on Natucket Sound.

Among Chatham's outstanding marine radio services to surface, submarine and aircraft prior to World War Two were the following:

Direct communication with the SS RYFUKU MARU which capsized during April, 1927, when her cargo of grain shifted in a mid-Atlantic storm.

Dock-to-dock message coverage with the SS BERENGARIA as mentioned above.

Sinking of the SS VESTRIS in 1928.

Sir Hubert Wilkins' attempt in the submarine NAUTILUS, to travel under the arctic polar ice cap from the Atlantic into the Pacific.

The Lindbergh South Atlantic trailblazing flight from Bathhurst, Gambia, West Africa, to Natal, Brazil, in 1936.

The round-the-world coverage of the dirigible GRAF ZEPPELIN in flight. Also the last communication with the dirigible HINDENBURG just before she was destroyed by fire at her Lakehurst, New Jersey mooring mast in 1937. (Footnote by Ed Hammons, manager of WCC in a letter dated February 29, 1980: "Francis Doane (XD) who was on watch at the time of the HINDENBURG disaster, advised they did not work the dirigible directly as she was approaching the docking area but obtained the information via our landline at the request of a German station."). Earlier, in May of that year, just after midnight, the HINDENBURG, enroute from Lakehurst to Highland Light, thence to Cape Race, Newfoundland and Friedrichshafen, Germany, passed right over the Chatham mast in a dense fog, so low that the Chatham operators on watch feared she would surely collide and bring down the mast, airship and all, although the flashing red light atop the mast could be seen (on clear nights) up off Plymouth, over 30 miles away, by vessels making the Sandwich entrance to the Cape Cod Canal.

Many communications with passenger aircraft in flight over near and far parts of the globe, as well as those on globe-girdling hops.

The submarine SQUALUS sinking and rescue attempts off Portsmouth, N. H., in 1939.

The Byrd antarctic polar expeditions.

The yacht COURAGE of Sir Thomas Lipton's last, and Tom Sopwith's first race attempt to lift "America's Mug," 1938-9.

1937 - Development of the successful new microwave beam method of keying marine transmitters from Chatham, over 30 miles airline, as a substitute for the old overland pole-line all-wire keying circuits.

Pioneering in free medical aid to ships at sea without doctors, to and from the U. S. Public Health hospitals in New York and Boston, thus alleviating much suffering and death, by radio advice. (The U. S. Coast Guard had been doing this earlier from their vessels which had physicians aboard.)

During 1942-45, the Navy operated the Chatham station, while the Army used the Marion transmitters for reliable war-time transatlantic communication. Upon release of Chatham in 1945 by the Navy to RCA-Radiomarine, a new transmitting plant at South Chatham was begun which by 1954 housed a concentration of over a dozen high-power, long-range radiotelegraph transmitters connected to new radiating systems for use on all marine ship-to-shore radiotelegraph bands currently in use by WCC (Wireless Cape Cod).

At Chatham on a morning of August, 1954, the base section of the graceful tubular steel mast was burned open like a chopped tree; the east set of five heavy steel guy wires was then cut at their anchor blocks by acetylene torch and, slowly at first, helped by a favoring easterly breeze, the tallest and most well-known landmark which had dominated this area for years dropped to the ground from its huge concrete foundation atop "Radio Hill," between Old Comer's Road and U. S. Highway Route 28.

The hundreds of tons of tubular steel and rigging whistled to a thunderous, earth-shaking reverberation as the big mast crashed heavily but harmlessly into the pine woods on the west side of the hill. Local junk collectors were to cut up and remove the remains as soon as practicable.

Looking back to the summer of 1913, Chatham natives and summer visitors watched in awe and fascination as the J. G. White Construction Company of New York had erected six of these masts upon the huge concrete foundations at Chathamport for the Marconi Wireless Telegraph Company of America. They were laid out in a line running roughly from northeast to southwest and were made up of steel cylinders constructed in quarter and half sections, flanged vertically and horizontally, secured together by bolts and guyed in short lengths broken by huge porcelain insulators and fastened to their ground anchors with steel cables.

The topmast hoisting arms were fitted with blocks and tackle to support square wooden cages in which the riggers worked while they bolted the sections together as they were winched up from the ground. Both teams of horses and steam winches were used.

The masts supported the directional antenna which collected radiotelegraph signals from a duplicate station in Norway, while the 150-kilowatt plant at Marion, just across the newly dug Cape Cod Canal, transmitted to Norway on "Circuit No. 3" of the Marconi transoceanic service, in competition with the transatlantic cable companies, up to the time of World War One, when the Navy took over and operated the plants.

All these profound changes and developments give Cape Cod preeminence as the location of the first high-power station to span the Atlantic from continental United States to England since Nobel Prize winner Guglielmo Marconi made the now famous first two-way communication in January, 1903, from his original station at South Wellfleet with its well-remembered four latticed wooden towers 210 feet tall, set at the corners of a 200-foot square, which suspended his inverted pyramid radiator, on the same site occupied later by the U. S. Army Camp Wellfleet.

(Continued on Page 22)

Station "NAE" Cape Cod

NEIGHBORS ON THE CAPE

ARTHUR E. ERICSON- one of the early Society Charter members [70 -Senior Spark-Gap Pioneer] with Ham Call W1NF, made Chief at this station in 1918. He was assigned NAE for 13 months, handling both radio marine and landwire traffic. "Art" built the USN station at Bath (NAE) on North Truro. Later "Art" became Radio Inspector for IWT at Boston in 1920. He was also assigned "NAD" Boston. Also he began his "ham" station in 1902. How old is Art ? He is 92. Art logged time on over 40 ships during his 'sea-going' days as a Wireless Operator. Shown below is Art on the SS NACOOCHEE/KFP of the Savannah Line in 1913. He said the 'little lday' passenger took a 'shine' to him. Assistants on KFP at the time were "Doc" Forsythe plus Operators Swett and Henry.. Arts first ship was the S.S. KORONA in 1910.

THE "WCC" STORY - RYDER Concluded

(Continued from Page 21)

When this early station became obsolete the guys of the towers were let go, and the famous 1903-1920 landmarks crashed to the Cape Cod sands. The erection of Marconi's very first mast circle was begun in 1901 on the same spot. This was composed of twenty 3-section masts, 200 feet tall, around a 200-foot circle, guyed together and to the ground. This structure was short-lived however, for in September of that year a few people saw these masts topple in the great gale of that time. This actually took place before all the guys of the finished cone aerial system could be snugged down tight. To Marconi and his assistants this disaster had been heart-rending as it represented a loss of $50,000 in masts and rigging in a single afternoon; but undaunted, the Senor immediately began rebuilding, providing Cape Cod with its sensational wonders of first among firsts in the major portion of the history of wireless communication, now reliably and regularly carried on, 24-hours a day every day of the year by the continually modernized and improved station WCC of the RCA-Radiomarine Corporation at Chatham on Cape Cod.

Most of the above material is excerpted from the RCA publication "Radio Age" of January, 1949, supplied to us by the courtesy of Mr. Ed. Hammons (SOWP member 1417-V), manager of WCC to whom we are most grateful.

Below we reproduce part of a letter from Mr. Hammons, containing some notes of addition and amplification. This letter is dated February 12, 1980.

"The station was constructed in 1914 by the J. G. White Engineering Company for the Marconi Wireless Telegraph Company of America.

"It was originally operated as a point-to-point station communicating with Europe. The receiving station was located at Chathamport on the elbow of Cape Cod overlooking Ryder's Cove, and the transmitting station, using a spark transmitter and later Alexanderson alternators, was constructed in Marion, Massachusetts, approximately 30 miles from Chatham. There was a landline circuit, strung on poles, from Chatham to Marion, and landlines from that point to New York City.

"In Chathamport there were six 350-foot tubular steel masts spaced several hundred feet apart to support the antennas. All but one of these were removed in 1919. The final mast served as a landmark for ships and lighter-than-air craft (dirigibles) crossing the Atlantic. This last mast was dismantled in 1954.

"The Radio Corporation of America was formed after World War I and assumed control of the Marconi system which had been taken over by the U. S. government during the war. I am not sure just what negotiations took place between the U. S. government and the Marconi Company.

"Marine operations began in Chatham on April 18, 1921 with the point-to-point service being phased out and transferred to New York Central on Long Island. That change was completed on October 15, 1921.

"Chatham's call sign was the old Wellfleet call letters WCC with the call letters WIM being assigned to Chatham shortly thereafter. WIM has since been discontinued, with WCC being used on all frequencies for radiotelegraph operation. Our new Radio Telex identification number is 1.01092.

"During the twenties there was considerable expansion in all forms of communication via WCC with a steadily increasing message volume from cargo vessels, immigrant ships, luxury liners and even prohibition rum runners. Stock-market quotations, fishing-fleet catch and positions reports as well as many other new services added to this growth.

"Chatham began testing high-frequency communications in 1925, and on May 9th, 1927, a regular ship-to shore high-frequency service was inaugurated. That same year Chatham discarded the old manual method of sending messages over telegraph lines and began using teletype machines for transmissions.

"Down through the years Chatham Radio has been involved in a number of historic events:

"WCC pioneered in giving free medical (MEDICO) advice to ships without doctors through the U. S. Public Health Service; had contact with zeppelins, submarines, Arctic and Antarctic expeditions, aircraft such as Howard Hughes' record-setting round-the-world flight, many distress situations, and the Portuguese liner SANTA MARIA hijacking of January 25 or 26,1961."

Mr. Hammons has supplied us with a number of photographs, some of which are reproduced here.

Some more recent photos were supplied by Bill Ryder, chief engineer and operator at the transmitter facility of WCC, South Chatham, Massachusetts.

The site, off Bay View Road, overlooks Nantucket Sound and the Atlantic Ocean, and is approximately three airline miles from the receiving site. As of May, 1980 the transmitters are housed in a brick building with a transmitter room of about 4000 square feet in area, plus a parts store-room, workshop and office. A garage and living quarters are provided in a separate building for one resident technician. These buildings were completed in 1947. A new diesel generator building was finished in 1980. This transmitter station supersedes the former site at Marion, Mass.

The WCC M/F transmitter, rated at 10 kW output, is the RCAGC type ET-8034-A, using a 5671 tube in the output stage. A 300-foot tower is used as a vertical radiator and is situated on marshland; the antenna is fed via a three-wire open transmission line. This transmitter has instant QSY for use on 500 kHz and 436 kHz, A-1 or A-2 emission.

There are seventeen H/F transmitters at WCC,RCAGC type M-1182-B, rated at 10 kW output AFSK or CW. These are SSB type with narrow-band filters to assure a clean signal on SITOR (AFSK) or CW transmission. A pair of 4CX5000A tubes are used in the output stage.

The H/F antennas are horizontal curtain types or dipoles, supported on wooden poles as high as 135 feet above the salt march. These are all fed with matching stubs and open wire transmission lines, with one exception: a 4 mHz antenna, 100 feet high, vertically suspended. All the H/F antennas are over salt marsh as is also the tower for the M/F, thus providing a good ground reflection and efficient radiation.

A.C. power is provided from the station's own substation with a 240-volt, 2000-ampere power panel. A Detroit 16-cylinder diesel provides 400 kW of emergency power, adequate to operate the complete facility.

Station control is via leased telephone lines, with all line signals being in FSK mode originating at the receiving site whether keyed by SITOR teletype, manual or automatic CW.

This transmitter-site data was supplied by Bill Ryder (SOWP 3477-P) who became interested in ham radio in his teens, receiving his ham license in 1935 and his commercial license in 1937. Bill spent a year at sea as a merchant ship operator in WW-2 and began to work at WCC, South Chatham, in 1947, first as transmitter technician, then as Technician-in-Charge since 1961. He has also had four years of experience in police communication and a couple of years with the Signal Corps as a civilian technician and engineer. He has had considerable experience servicing marine radio gear on fishing and pleasure craft.

How to Succeed in Travel or...
Ten Commandments for All Travelers

1. Thou shalt not expect to find things as thou has them at home, for thou has left thy home to find them different.
2. Thou shalt not take anything too seriously – for a carefree mind is the beginning of a vacation.
3. Thou shalt not let the other tourist get on thy nerves – for thou art paying out good money to have a good time.
4. Remember thy passport so that thou knowest where it is at all time – for a man without a passport is a man without a country.
5. Blessed is the man who can make change in any language – for lo, he shall not be cheated.
6. Blessed is the man who can say thank you in any language – and it shall be worth more to him than many tips.
7. Thou shalt not worry. He that worrieth hath no pleasure – and few things are ever fatal.
8. Thou shalt when in Rome do somewhat as the Romans do; if in difficulty thou shalt use thy American common sense and friendliness.
9. Thou shalt not judge the people of a country by one person with whom thou hast had trouble.
10. Remember thou art a guest in every land – Yea, he that treateth his host with respect shall be treated as an honored guest.

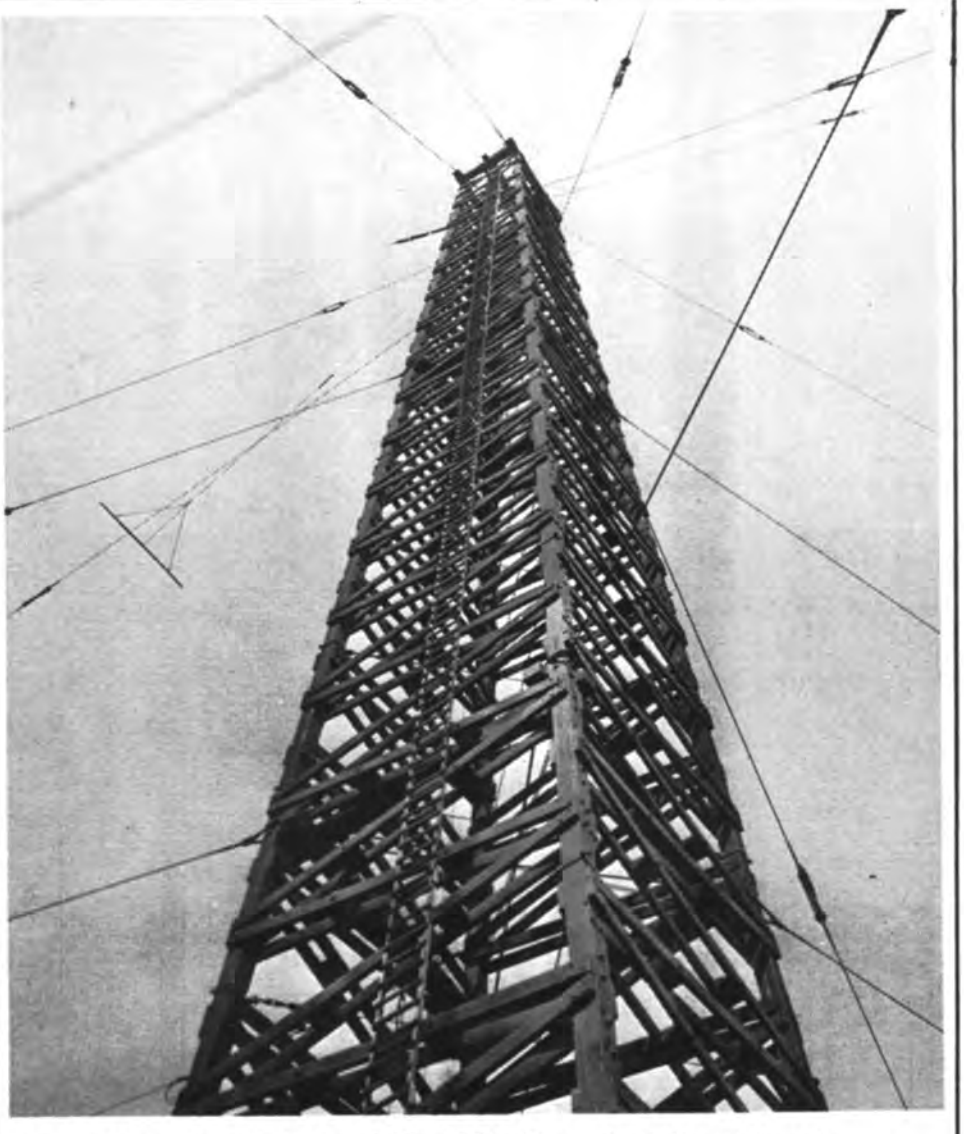
Furnished By

George X.M.Collier

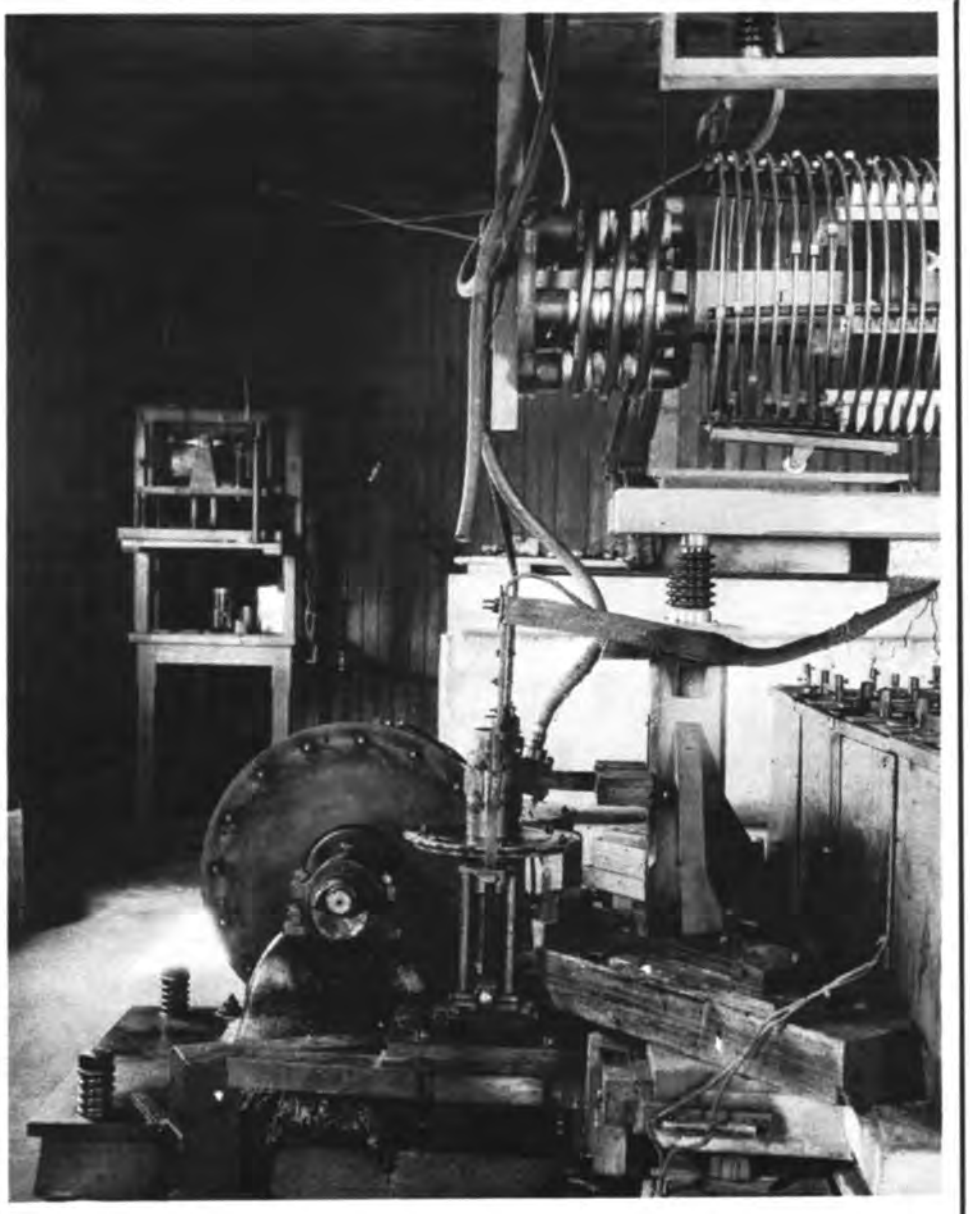
Wellfleet Antiques

Photographed 1916 By

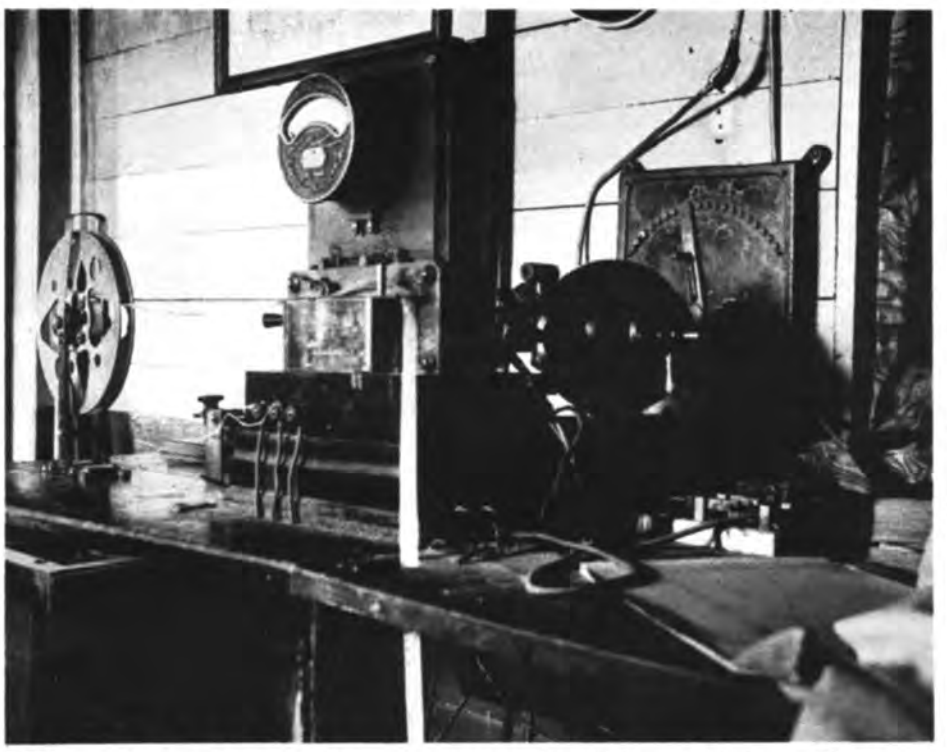
Sumner B. Young Ex-1CO



The "Great Storm'of Nov. 25th 1901 blew down the original circular masts, one nearly hitting Mr. Vyvyan, Marconi's Assistant. The Second towers erected consisted of 4 units built on a square each 200 feet apart. They were built of 3x12 timbers bolted together and set in a concrete base 30' square by 4' thick. The masts were 210' high, starting at 24' square at base and tapering ato 8' at top. When built the Easternmost tower was 165 from the edge of a cliff overlooking the Atlantic. By 1906 it became evident erosion of the bank would destroy them but by then the station had already become obsolete.



This pictures the WCC Transmitter [vintage 1906]. Rotary gap with oscillation transformer above it, in foreground. Tuning condenser, white in background. What appears to be "kickback preventers" to far right. Keying relay, 20Kv, in left background. Note air blast hoses, one open and one attached at spark gap. This rotor was approximately three feet in diameter. Picture taken by Young 1916.



Believe it or not, they had tape keyers in 1916. This is a Wheatstone unit, apparently modified from a land wire unit.. Pictures on this page were all taken by Sumner B. Young who furnished them to Member George X.M. Collier for use in Society publications.

This pictures the rugged interior of the towers showing the cross bracing. It might be noted that each tower was secure in four directions by three levels of one inche steel cable. The insulators used to suspend the antenna from the masts were constructed of rope and rubber hose, the ends of the latter being filled with melted sulfer. If the rope outside the rubber became wet, current would not flow through the dry, water-repellent sulfur-coated rope inside the hose. This from E.P. Lohr, Park Historian in a paper on the T echnical History of Marconi's South Wellfleet (MA) Station 1901-1922. [Furnished by courtesy of Barney J. Zweig, 3236-P].

'SC'—First U.S. Station to Work Ships at Sea

REPRINTED FROM THE MARCONIGRAPH JANUAY 1913

S'conset the Sentinel of the Sea

An Old-Timer's Impressions of the Little Station on Nantucket Island

VIGOROUS application of my coat sleeve to the window pane disclosed nothing but an irregular patch of inky blackness. Dawn had not yet come. In disgust I turned away, and as if in resentment of my temerity in veuturing to look upon Nature in her angriest mood, the storm howled with even greater fury; rain descended in bucketfuls and the wind rose to a piercing shriek. The little house rocked on its foundations, windows rattled, a door banged—ugh! What a night!

In fancy my mind ran back to a similar night, four years ago. I was sitting in that same little room, sprawled out in a wooden arm chair, lazily contemplating the smoke rings which slowly drifted ceilingward. Temporary insomnia had caused me to sit in with the operator doing the night trick and the monotonous succession of routine messages had lulled me into a state of apathy. Over by the window could be seen the broad back of the man on duty, Jack Irwin, bent forward over his key, head on hand, patiently adjusting the handles of the tuner. The minutes lagged. Suddenly a smothered ejaculation roused me and I glanced up. Everything was changed. With every muscle tense, his lips set hard and his eyes starring fixedly into space, Irwin was gripping the edge of the table in a manner that plainly showed the excitement under which he was laboring. Minute after minute I watched him, scarcely breathing for fear the message that was being whispered into the head 'phones might be lost. After what seemed hours of suspense, his hand shot forward to the switch handle and this staccato message crashed through the little room:

"MKC, MKC, MKC. What is your position?"

Nothing very startling to the layman in those few words, but with one bound I had crossed the room to the pad under his hand.

On it was scrawled:

C. Q. D., C. Q. D., C. Q. D., MKC.

I snapped the spare receivers to my ears prepared to "listen in" for further details. After a time the signals began to come in, very faint, but steady:

"*Republic* rammed by unknown steamer twenty-six miles southwest of Nantucket Lightship. Badly in need of immediate assistance.

SEALBY."

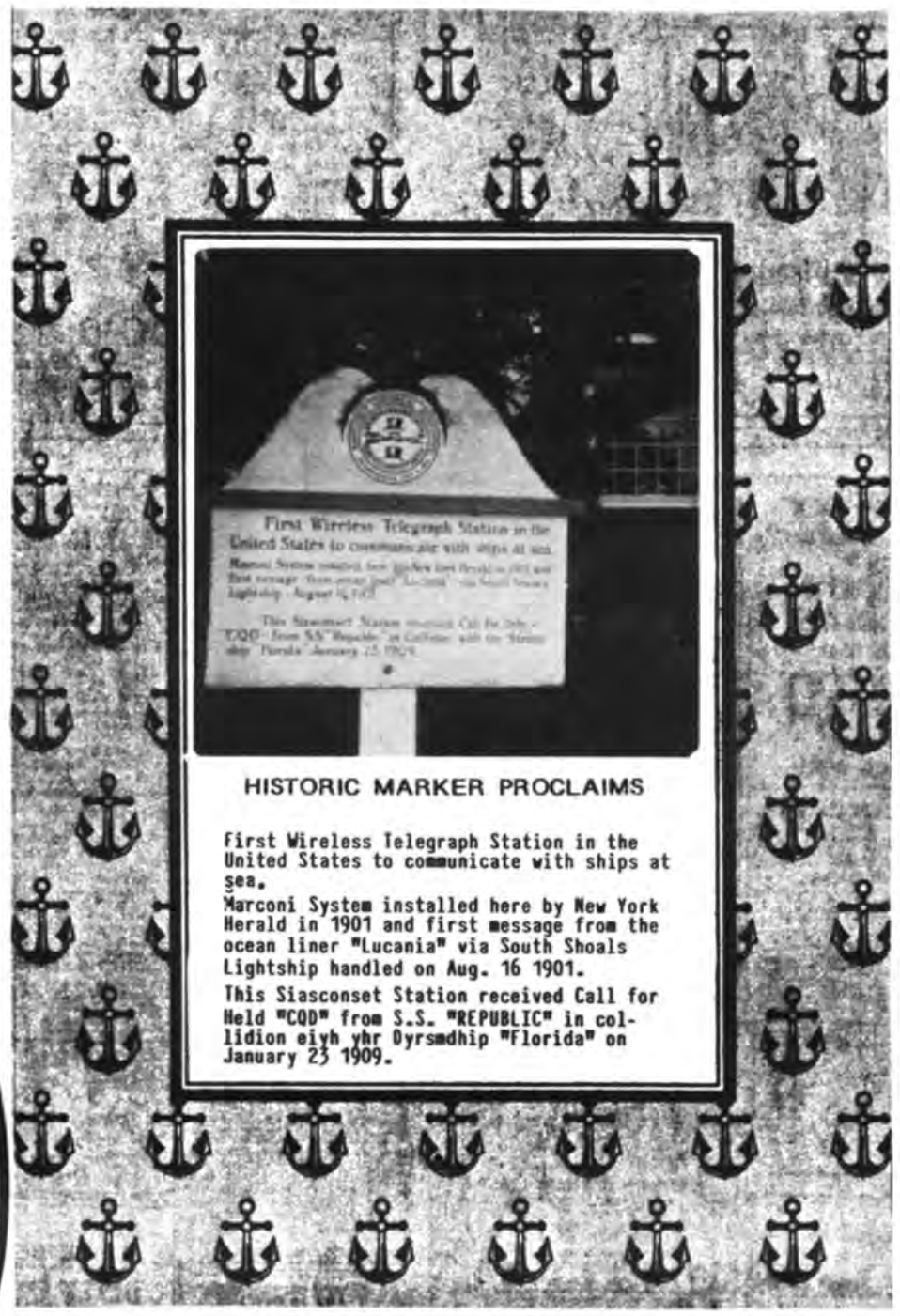
Immediately the answer reverberated through the little room:

"O. K., old man. I will pass it along to *Baltic* and *La Lorraine*, who are now in communication and I will also give it to Wood's Hole and get them to send a revenue cutter."

Suddenly the whole station was roused to activity. The *Republic* was sinking! Zit! zang! rang out the messages, appealing, petitioning, imploring all vessels to rush to the aid of the doomed steamship. How anxiously was each meager report awaited. Hour after hour the progress of the steamers rushing to her aid drifted interminably through the buzzing headgear. Would they reach her in time?—that was the question. Then followed a terrible period of suspense. The mighty *Baltic* reported that she was within ten miles of the sinking vessel and was slowly groping her way through the impenetrable fog. Any degree of speed was impossible, the danger of collision was too great.

Ten hours after the first message was received word finally came that all but six of the precious human cargo were safe. The details of the catastrophe, the bravery of Jack Binns in standing by his key while the vessel was sinking the timely rescue of the passengers through the aid of the appealing wireless calls, are too well known to be again repeated. As you well remember, the next morning, and for many days afterward, the newspapers contained vivid descriptions of the terrible collision and devoted column after column to laudatory accounts of each man's part in the disaster.

I have often wondered if the world, while eagerly devouring these narratives, gave a thought to the men who made it possible for them to get the welcome news that all but six of those aboard had been rescued, hours before the ship that carried them to safety reached her dock. I venture to say that few, if any, of those who read the early accounts, stopped for a moment to think kindly of the men who, cooped up in the fog-bound Siasconset station, were laboring night and day with the enormous mass of press messages. With scarcely any food or sleep, nerves on edge from the constant strain these men stuck manfully to the task of relieving the anxiety of the world. Ninety thousand words of press matter were sent out of the little building, hundreds of messages to and from ships—all within 48 hours. Some would say it was their duty to do this; and dismiss the matter. Unquestionably it was, but coming down to essentials, duty ably performed under trying circumstances is the basis of heroism.



HISTORIC MARKER PROCLAIMS

First Wireless Telegraph Station in the United States to communicate with ships at sea.
Marconi System installed here by New York Herald in 1901 and first message from the ocean liner "Lucania" via South Shoals Lightship handled on Aug. 16 1901.
This Siasconset Station received Call for Held "CQD" from S.S. "REPUBLIC" in collidion eiyh yhr Oyrsmdhip "Florida" on January 23 1909.

Wireless station, Siasconset, Mass., where the "C Q D" message was received from the *Republic*

Yet it is seldom that a word of praise is given to the men at land stations for noble work, nobly performed.

With the sinking of the *Republic*, the lonely station at Siasconset on Nantucket Island became an object of interest. This interest was again aroused when the *Carpathia* was steaming toward New York bearing the survivors of the ill-fated *Titanic*. A certain amount of criticism descended on the staff of the Siasconset station at that time, because, though pressed for news from all parts of the world, not a word could be obtained. Try as they would, it was found impossible to give the world the news, for, as operator Cowden says: "We were loaded down with messages, but owing to the regular operator on the *Carpathia* being completely worn out and the rescued second operator of the *Titanic* being so badly frozen, we were unable to dispose of our traffic. It was pitiful to hear those men on the rescue ship answer in semi-conscious tones; their experiences must have been terrible."

In every instance where they have been needed the men at the land stations have ably discharged their duty, at times in the face of enormous odds. All honor to these silent workers.

Little is known of the life of the men at Siasconset. Viewed at the height of the summer season the prospect of a berth at the station looks inviting—good surf-bathing, tennis, golf, shooting, fishing, riding and a bevy of pretty girls among the seventeen hundred summer inhabitants. But when old Boreas blows his chilling breath the aspect changes. In place of the pretty frocks of dainty little ladies and the immaculate white flannels of robust collegians, the eye rests on the drab and bedraggled garments of the native fisher folk. The cheery bungalows are boarded up and their late occupants gone until the next year. The only signs of life are in the shacks that shelter the fishermen and their families, fourteen in all. High winds pile the snow in heavy drifts, making the path to the station almost impassable at times. Fog, rain, snow and sleet follow each other in dreary succession and the operators who are filling in time between watches wear exceedingly gloomy countenances.

"That is really the greatest hardship in winter," one operator explained, "to find something to do with leisure moments. Cards, checkers and books become tiresome after a time. Occasionally, though, we get a little action when not on duty. For example, the Marconi Company maintains a land wire across Nantucket Island, a distance of more than seven miles; about a third of this line was carried away in a severe sleet storm on Christmas Eve and we all had to turn out to fix it up. It was no easy job, I assure you, for about two miles of the wire was covered with ice about three inches thick and every bit of it had to be broken away with hammers. Two days of hard work in the biting cold were required to replace the wire and put the line in operation again. Pleasant work that, I *don't* think."

"But at that, the operators welcomed the necessary activity," continued my informant. "Spare time does hang heavily on our hands; it is all right when you are on duty for then a man's mind must of necessity be very active, by reason of the heavy responsibilites that rest upon his shoulders. The everlasting thought of the dreaded S. O. S. call keeps his ears glued to the head 'phones, for right well he knows that should a distress call come and he not be there hundreds of lives may be lost. Occasionally, of course, he lays aside his receivers to stir the coal fire but you will notice that he slips back to his instruments in a hurry. Each winter this station is the means of sav-

(Continued on Page 25)

WSC - Siasconset (SC)

ing hundreds of lives and a great many thousand dollars worth of property. As you know, Nantucket Sound is a great waterway for both sailing vessels and steamers bound to and from Boston and the northern ports. The treacherous Nantucket Shoals bring many a schooner to grief. We are in telephone communication with numerous U. S. Life Saving Stations who frequently send us word that a vessel is in distress on such and such a shoal. Word is immediately wireless to the revenue cutter *Acushnet*, stationed at Wood's Hole, or to the revenue cutter *Gresham*, lying at Provincetown, ready at all times to rush wherever we may direct them. During the winter it is a common occurrence to have both revenue cutters assisting schooners at a time when still other schooners are appealing for help; and often just as soon as one vessel is anchored in safety the cutter rushes off to the next. So, dreary as our station may appear from the outside, at times it is a regular beehive inside."

Siasconset operating room at it looks today.

Aside from its occupants the Siasconset station itself is of interest. It was the first commercial wireless station built in the United States and, although little remains of the initial installation, to me, somehow, the place is reminiscent of the early days.

Originally built for the New York *Herald*, the first message was received at 10 o'clock on the morning of August 12, 1901. It was sent from the Nantucket Lightship anchored off South Shoals and consisted of eight words:

"Signals clear; am using plain aerial. Good luck."

What a feat that was considered! A message sent without wires over a distance of 43 miles. Could it really be possible?

To give some idea of the marvelous progress made in wireless communication during the few years that have elapsed, let me recall the remark of the manager of a great transatlantic steamship line at the time the *Herald* first announced it would place in operation, as a convenience for its readers, a system of reporting incoming vessels by wireless.

This manager felt certain that it would be "a big thing to be informed ten to twelve hours in advance. How far is it from the lightship to the shore?"

He was told that the distance was 43 miles.

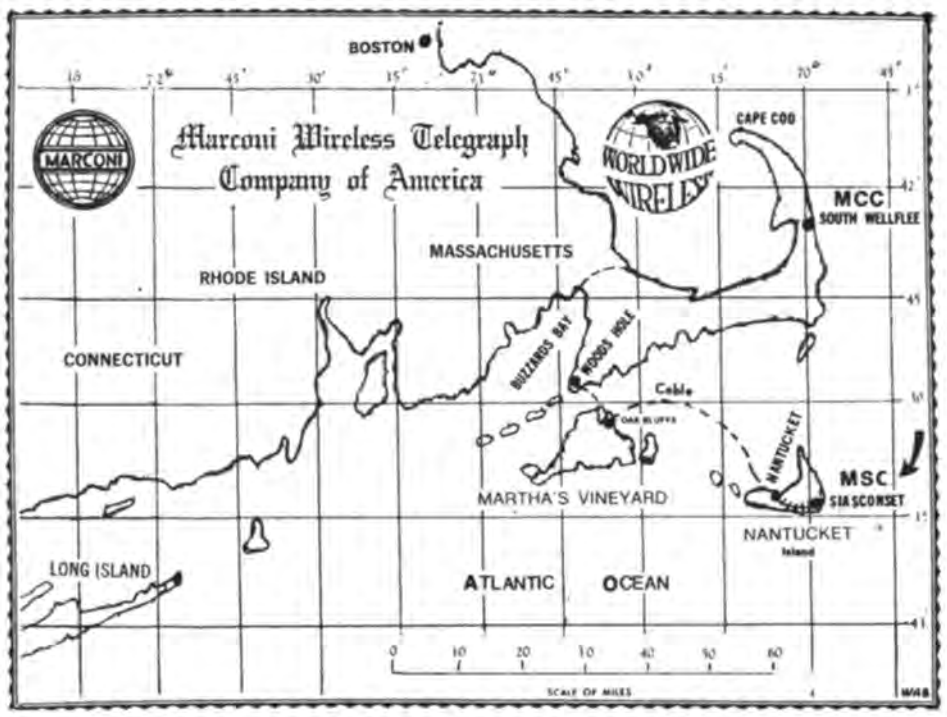
"That's a pretty good stretch," he replied, slowly, 'but I am not surprised that it can be covered by wireless telegraphy."

Grave doubts, however, were entertained by the majority as to the success of the plan. Consequently, when everything went off smoothly the innovation was hailed as a triumph of modern science and journalism and all concerned were praised to the skies.

Incidentally, it was well-deserved praise for the work of installation had been filled with many difficulties and at times had been made ungracious by the pure cussedness and lack of intelligent appreciation shown by some of the agents that had to be employed. From the beginning public spirit seemed to be pleasurably aroused in its behalf but wherever it narrowed down to the individual who desired to have a finger in the particular pie, the theory of the greatest good to the greatest number was usually found to be centered in number one.

On the other hand, considerable interest and intelligence were shown by the workmen directly concerned with the tasks of building, transporting, erecting, rigging and equipping the components of the plant. The spars for the aerial were built in New Bedford, and an assertion, based upon the dictum of the oldest seagoing inhabitant, was left unchallenged—though after the sea manner doubters were looked for—that the sticks were the largest ever shaped in that port.

For the shore station three masts were required: together weighing nearly five tons; when assembled the ensign fluttered at a height of 166½ feet above the ground. It required nine days to give these masts and the lightship topmasts a fair, sailorlike shape and to get them overboard, ready for transportation; for despite a reasonable hope, the steamship company that plied between the mainland and the islands refused because of the bulk of the lower mast to carry the outfit. So a quaint little steamer, half wrecker and half fisher, was chartered in Nantucket, and after an unwarrantable delay of an entire day, towed the spars through the crooked though generally sheltered seventy-odd miles of water that lie between New Bedford and the harbor of Nantucket.



In the meantime the topmast, sprit and spare topmast for the lightship and the instruments had been sent to Wood's Hole. Here, through the courtesy of the lighthouse inspector these were taken aboard the tender *Mayflower*, and simultaneously with the arrival of the land installation at Siasconset, were received on the lightship at South Shoals—as seafaring men persist in calling the shallow water sea mark officially known as the Nantucket Shoals Lightship.

Sankaty Head, a flashing lantern erected on a high bluff some two miles north of Siasconset, had first been selected for the shore station, but subsequent examination of the government chart showed that the aerial messages seeking the nearest wire would have to cross nearly four miles of unnecessary land and that numerous telephone circuits were so placed that possible interference might be set up.

The site finally chosen was thought to be nearly ideal and speedy and harmonious negotiations were closed for a plot of ground for the pole and a cottage for instruments and operators' quarters were secured. Once upon the ground, the riggers, in charge of a skilful boss, made a deft job of the erection of the pole. Owing to the narrowness of the streets and of the wharves in Nantucket and the character of one section of the island's main road—abnormally termed the "State Road" by the natives—the spars had to be sent out on timber wheels carried from the mainland. The drag was heavy and hard and exercised to a marked degree the skill and energy of the transporting agent. But all went cheerily and briskly and in the end—two days after the spars were landed on the hill chosen for a site—they were placed and stayed, and a day later the Siasconset station was ready for the duties expected.

Last summer the prospect of a berth at the station looked inviting.

A distinct and heartwarming sympathy was shown by the natives of Siasconset. From a critical and sentimental point of view venerable and skilled retired master mariners aided with advice and grew warm when differences arose on occult questions of seamanship. Every ancient whaler that honored the occasion by his presence and encouraged the situation by his fact and fancy had his own theory of the sole shipshape and Bristol fashion by which the stout and skyseeking poles should be handled and fitted. Many and recondite were the briny discussions over the gear and equipment, and widespread and convincing, likewise hoary and emphatic, were the traditions, the examples, the principles and precedents arrayed to show "just how, and only just how" the hooking on, the swaying up and the securing and plumbing of the spars should be done. Summer visitors were not present in any appreciable quantity; a few gathered early, but apparently became ashamed of their ignorance of matters nautical, and soon ambled away.

No time was lost in shipping the working party, now somewhat reduced in number, to Nantucket, and, it was hoped, to the lightship. But though the tug, chartered in Boston, arrived with mathematical precision, its master was filled with denials. First off, there was not, in his opinion, sufficient water to cross the bar; next, he declined to go to the lightship because the weather was too boisterous; then, when the soundness of his plea was questioned, the new and sufficient, also unexpected, argument was advanced that the tug did not have sufficient coal for the work and for the detention that might occur. At a season when time was so precious, this seemed to be fooling with a vengeance, so the tug was dispatched for Martha's Vineyard for fuel. When she reached there, for some reason her agents substituted a larger tug which arrived, ready for the duty demanded, the next morning.

Under the able supervision of Mr. Bradfield, of the Marconi Company, the work of equipping the lightship went forward, quickly and surely. To us on shore the hours lagged, but at last all doubts were dispelled and vexed questions answered by a sudden spirited crackling of sparks in the instrument room. The first wireless station in the United States was in operation!

Under the *Herald* régime a 10-inch induction coil was used, worked from a set of sixteen chloride cells. The receiver comprised a coherer which operated a Morse printer. This method was not of very great efficiency, but the main object was to communicate with the lightship; "paid" business being practically unknown.

During October of 1904 the station was moved to its present site; the new building contained both engine and operating rooms, the former equipped with a 4½ h.p. Hornsby Akroyo kerosene engine belted to a 2-kw. direct current dynamo, which charged a set of 55 chloride accumulators automatically operating the motor generator, controlled from the operating room. Seven years ago two charges a week were sufficient to keep the battery supplied as business was light and few ships carried wireless equipment; at the present writing the battery has to be charged almost daily in order to supply sufficient current, several hundred messages being an average day's business.

One morning about the middle of November, five years ago, the station was destroyed by fire, the origin of which was never discovered. While the remains of the station were still smouldering the four men comprising the staff rigged up a crude apparatus and six hours after the fire started communication had been established. During the two months required for the completion of the present station regular business was carried on in a small shed.

Siasconset's spark. This photograph was made with a ⅕ sec. exposure while the disc was running at 1800 R. P. M. Although traveling at a speed of more than 100 miles an hour, the studs appear to be standing still, due to the fact that the disc was illuminated only at the instant when the moving stud came opposite the stationary stud, causing the spark to discharge.

Business at Siasconset has always been conducted by a staff of four men; an officer in charge and three eight-hour-watch men who maintain a continuous wireless service. The present equipment is somewhat similar to that of 1905, except that the "disc spark" is now used, giving a high tone more easily read than the flat signals formerly employed, and the range has been increased to 300 miles.

The little station up on Nantucket Island has come to be looked upon as an ether-wave landmark, so to speak, by operators on the transatlantic leviathans. Many are the tales her antenna has told and many are the tales to come. Good old Siasconset. Long may she live and prosper!

A Pioneer and His Memories

Historical Marconi Station Visited with Reverence

MSC MARCONI Siasconset

BY-CDR. E. J. QUINBY, USN RET. (SK)

"SK" Nov. 8 1981

Cdr. E. J. Quinby, USN (Ret.)

The little inter-island steamer was tooting her warning whistle impatient to shove off with her load of passengers from Woods Hole for the two hour run to Nantucket. She had a schedule to maintain, with a call at Martha's Vineyard on the way back. Hurriedly we parked our car and bought four round trip tickets to Nantucket for our party of two couples and hastened up the gang-plank just as the deck hands were casting off. Compatible cousins, we automatically gathered at the refreshment bar to toast our luck in having just made it in the nick of time. The two Gals were anticipating the fun of browsing through the village shops. Roy looked forward to visiting the famous Whaling Museum. My main objective was to track down, if possible, America's first marine wireless station, MSC. In 1901 Marconi had established the 10" spark coil installation at Siasconset to provide communication with a similar set he was putting aboard the Nantucket Light Ship and the few British flag steamers he was equipping. Surely some of the older natives would be able to direct me to that important landmark. I was quite unaware of the cloak of oblivion with which time had surrounded what I fervently regarded as a sacred shrine.

As we ventured out into the deep and out of sight of land, my thoughts reverted to some of the pioneer Wireless Operators with their primitive wireless telegraph gear carried by these little steamers. Some became famous figures in the swiftly expanding industry, but none of them came up so far and so fast as the brilliant teenager who manned the little shore station at Siasconset and used the sine DS which became familiar up and down the coast. His crisp, clear 35 word per minute technique at the key provided a beautiful example for all of us to emulate.

Strolling around topside in search of the modern radio equipment now carried on these vessels, I traced the antenna rig into the pilot house. There I observed the Mate on watch speaking into a telephone hand set. Wonderful development this--but how unglamorous compared to the early spectacular techniques! A framed radio telephone license graced the bulkhead. My thoughts drifted back to that early Certificate of Skill issued to David Sarnoff on June 27, 1911. It was the fourth ever issued at the Brooklyn Navy Yard, New York. The youngster to whom it was issued had already accumulated three years of experience as a Wireless Operator at sea and ashore before he became thus "qualified."

As we made our landfall, we spotted the Nantucket Light, and marvelled at its unique design. The big "lantern" is perched atop a church steeple, tallest prominence on the horizon! Ashore we discovered that the town authorities have wisely ordained that the quaint, historic atmosphere of Nantucket shall remain unsullied by the "march of progress." Instead of "modern improvements" we were delighted to find streets paved with real cobble-stones (not Belgian blocks), and they are lined with shade trees and brick sidewalks between rows of beautiful colonial houses, some of well painted wood, some of brick, some of stone. All shops and residences reveal pride of ownership and diligent maintenance, with blooming flowers in window boxes and small, neatly tended gardens. Many of the quaint houses proudly display their dates of origin, some in the 1700's, one boasts 1686. The narrow, crooked lanes indicate random growth as this whaling port expanded through the years. The gals enjoyed the shops while Roy and I inspected the fabulous Whaling Museum. By prearrangement, Margaret and Amy met us at an attractive restaurant which is steeped in salty atmosphere, where we enjoyed a hearty seafood dinner. But neither the waiters nor the proprietor could direct us to the site of the historic Marconi Station. They had never heard of any such establishment. But they did get us pointed toward Siasconset, down at the other end of the island. That was at least helpful. We rented a car and lit out in search of a place to tie up for the night, as we found absolutely nothing available in town. Apparently all accommodations in Nantucket are reserved well in advance throughout the "season." As dusk approached, we had the good fortune to find accommodations in a private home near the Airport. The all pervading mist that descended upon the island brought us a moaning lullaby from a distant foghorn, and I wondered if we might be listening to the ominous warning from Nantucket Light Ship. Soon dropping off to sleep, I dreamed of the night she had been run down and sunk by a big Ocean Greyhound. That was one of the many occasions when the 'Sconset Wireless Station made headlines across the nation.

The next morning, after breakfast, we set out in quest of the historic MSC (later WSC), and our trail led to the village crossroads at Siasconset, a community of small and medium sized cottages, quaint, artistic, attractive. The whole place has all the earmarks of an artist-writer colony. At the focal point we found a diminutive post office and a charming General Store. Could they direct us to the site of the historic Marconi Wireless Station? Well, no--not exactly. But down thataway along the beach we would find the Coast Guard Radar Station. That sounded encouraging, so we headed down thataway. On a broad expanse of meadowland with beach beyond, we came upon a vast array of neat white buildings spread out over many acres. They were surmounted with every conceivable style of antennae. The whole establishment was surrounded by tall barbed-wire fencing, and the approach driveway led to the main control gate, guarded by a uniformed sentry. We pulled up and I inquired about the Marconi Wireless Station.

"Never heard of it," was the discouraging reply, and after scanning our vehicle for the required stickers and finding none, the sentry announced, "Sorry, you can't dirve in here without a pass."

So I exhibited my I.D. card and indicated that I would like to speak with the C.O. Saluting smartly, the sentry courteously suggested that I park the car "right over there" and step inside the office to talk with the Duty Officer. The Lieutenant who had the duty expressed regret over being unable to identify any building on the station which might have served formerly as the Marconi Wireless Station. In fact he was unaware that there ever had been one on the island! However, he displayed interest, and invited me to make myself comfortable while he made some telephone inquiries--and offered me a cup of coffee. The phone calls around the establishment brought no results whatever. Nobody on the station had ever heard of the famous Marconi Wireless Station MSC (or WSC). While waiting for

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the various extensions to answer, the Lieutenant revealed that this was an elaborate Radar and Loran center. I gathered that it did some important tracking for modern missiles and space vehicles. Here obviously was a bee-hive of ultra-modern radio development, but apparently the glorious, significant beginnings of the whole complex technique were a closed book, completely forgotten by these forward-looking wizards. I found it difficult to believe.

The Duty Officer was now dialing an outside number. Reaching some friend back in the town of Nantucket, he made inquiries about "an early Marconi Wireless Station somewhere on the island--do you remember any such place, Joe?" Apparently Joe seemed to recall such a place, and the Lieutenant began jotting down some notes. Here a clue was developing at last. "There used to be a small shingled cottage down the road leading inland from the Post Office at Siasconset," said Joe, "on the left side of the road. And there used to be a small white wooden sign in front of it that said something or other about Marconi. Maybe that's what he is looking for?" I thanked the Duty Officer and we took off pronto, following this suggestion.

Back at the Post Office we turned left and headed out of the village. Leaving the closely bunched houses behind, we emerged out into the meadow lands a short distance, and there we spied the small white cottage on the left, partly hidden behind a tall, neatly trimmed hedge. The cottage roof and sides were covered with well weathered, silvery shingled. And in front of the cottage, beside the entrance path, there stood the little white wooden sign, with the inscription "about Marconi." I quickly unlimbered the camera and photographed the inscription. Then I approached the cottage. Through a small bay window, I observed some plants in glass jars, and basking in the sun was a Siamese kitten, half grown. I disturbed his siesta by tapping on the glass, and he sprang to his feet, greeting me with that hoarse voice so characteristic of the breed. His brilliant blue eyes sparkled through the window just, as I imagined, the blue sparks had flashed from the 10" spark coil keyed by the youthful David Sarnoff more than half a century ago.

Margaret and Jay Quinby pose outside the bay window of the old Marconi Wireless Station MSC in August 1974, where young David Sarnoff was Operator in 1908

Reminiscences raced through my mind. Inside that window I imagined the figure of that 17 year old DS pounding the brass key to spell out messages in dots and dashes with crackling blue fire illuminating the whole interior as well as the snow covered landscape outside. This was the same immigrant boy from Russia who went to work for the Postal Telegraph and Commercial Cable Company at Herald Square in New York for $5.00 per week to help support his widowed mother and his two younger brothers in their ghetto tenement. This was the boy who raced uptown and downtown afoot to pocket the nickel carfare and still deliver the messages promptly. This was the boy who arose at 4:00 a.m. to deliver newspapers before reporting for work, and who attended the Educational Alliance school evenings so he could master the English language. And this was the same youngster who had observed that Telegraph Operators made more money than the boys who delivered the messages. So he had diligently studied the Morse code, nearly driving his mother to distraction with the clatter of the little practice telegraph instrument he purchased for $1.50 from his first week's pay. Many of the messages that came over the wire were for the New York HERALD, in the same building.

Some of these originated on ships at sea, coming via the primitive little Marconi Marine Wireless station at Siasconset on Nantucket Island. The batteries for its 10" spark coil transmitter were charged by wind-power at first. As the station waxed busier, a small gasoline engine had been installed to drive the generator. The HERALD had arranged with Marconi to handle reports thus for the newspaper's Shipping News column. The mysterious wireless telegraph system which made this possible fascinated the young Sarnoff. When he heard

David Sarnoff at age 17, as Wireless Operator at the lonely Marconi Station MSC at Siasconset.

that the Marconi Company was hiring Operators, his keen eye for opportunity prompted him to apply for work with the budding new Marconi Wireless Telegraph Company of America. However, officials there declined to trust a 13 year old kid as Operator. "But we can use you as an Office Boy," they had told him.

Wisely David had seized the opportunity to join the promising new enterprise. But instead of just sticking the letters they gave him in the files, he had first reach each one carefully, so that soon he became as familiar with the affairs of the organization as any of its entire 24 employees. And when Marconi himself had arrived from England to visit the company's New York office, the young David attached himself to his Hero and served as his "side boy," running errands and taking care of every personal need. Marconi was amused and flattered by the attention. The ultimate result was warm-hearted consideration which ripened into strong business ties. With the passing of years, this "office boy" was to become the world's most influential figure in the commercial development of Marconi's invention, and to enjoy a lasting friendship with the great man on equal footing.

By 1908, when Sarnoff was a mere 17 years of age, he was entrusted at last to serve as the lone Wireless Operator aboard the S.S. NEW YORK running between New York and Liverpool. At that time the American Marconi Company had installations on just four passenger ships including the PHILADELPHIA, the ST. LOUIS and the ST. PAUL, all of the American Line. It was important that the Operator on each of these Trans-Atlantic Liners render satisfactory service to protect the reputation of the Marconi organization. For this responsibility, each was paid $45. per month, out of which he had to buy his own uniform and maintain presentable appearance. When an opening appeared for an Operator at the company's shore station at Siasconset, the ambitious David applied for the job, to gain valuable experience. The Marconi authorities were at first reluctant to assign such a youngster to this important post. However, the 17 year old David possessed the rare abilities required for station MSC; he was proficient at both the Continental code used by the British-equipped ships and at the American Morse code so popular with the numerous ships flying the American flag, many of which were being equipped by the De Forest-United Wireless system. Furthermore, it was necessary for the Operator at MSC to handle the land wire with which messages were exchanged, using the clattering metalic sounder instead of the musical tone of the wireless receiver. Young Samoff could handle either code on either medium. This versatility influenced his superiors, and David got the job because it wasn't easy to keep good Operators up there in the seclusion of that island outpost.

Starting at $60. per month, Samoff's proficiency soon earned him a raise to $70. out of which he sent $40. home to his mother and paid $25. per month for board at a nearby farmstead. Having soon exhausted the small technical library at the Marconi station, he sought more books at the Nantucket public library. Although he had made his first trip from the steamboat dock at Nantucket to Siasconset on the little narrow-gauge steam train at the Marconi Company's expense, he could not afford to regularly patronize the railroad, so he bought a cheap second-hand bicycle for the ten mile trip. But at times when snow covered the trail, he walked to Nantucket and back.

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At the Marconi Company's expense, young "DS" arrived at Siasconset in 1908 via the little narrow guage steam train from the Steamboat wharf at Nantucket. In the interest of economy, he bouhgt a second-hand bicycle for his subsequent trips over the ten mile trail.
Photo - Courtesy Nantucket Historical Society (EJQ)

Picture of David Sarnof at the key of the transmitter at Station "SC" at Siasconset. This picture was taken in 1908 when David was 17 years old. Note the kerosene lamp in the corner above the desk. The station did have good coverage It was commissioned Aug. 17 1901 by the New York Herald. W.W. Bradfield and E. George were the first two Marconi officials assigned.

The lonely station at 'Sconset became increasingly important, handling marine traffic as the number of ships equipped with wireless increased. Meanwhile, the powerful 25 KW spark transmitter in the experimental station at South Wellfleet on Cape Cod (MCC) began sending messages to ships far out at sea and continued the effort to span the Atlantic to provide a reliable inter-continental service. MSC made the newspaper headlines when Jack Binns, Wireless Operator aboard the S.S. REPUBLIC (MKC) flashed the ominous CQD distress call Jan. 23, 1909, after his ship had been run down in the fog off Martha's Vineyard by the S.S. FLORIDA. It was Jack Irwin, alert on duty at the Marconi 'Sconset station who picked up the call from the sinking ship and summoned help, resulting in the saving of 1600 lives, and the importance of wireless at sea was brought to the public's attention.

Jack Binns won fame in sea annals for flashing first wireless call for help.

The ill-fated Steamer REPUBLIC was rammed by the Italian Steamship SS Florida on Jan. 23 1909. Operator Jack Binns aboard the Republic was the first operator on a large liner to use wireless which ultimately saved over 1600 lives on both ships.

Collision of the two ships occured off Southwest Nantucket Shoals Light ship. Binns call from station MKC on the Republic was picked up by Jack Irwin, Operator at "SC" Siasconset, Ma. He broadcast the emergency and alerted the SS Baltic who changed course and picked up the passengers and crew of both ships.

This was the first in the annals of the sea where "Wireless" was used to rescue so many people.

By 1910, David Sarnoff, now 18 years of age, won the job as Wireless Operator aboard the swift S.S. HARVARD running between New York and Boston. He progressed from that post to the S.S. ANTILLES, newest passenger ship of the Southern Pacific Steamship Company (Morgan Line) running between New York and New Orleans. His satisfactory performance on these vessels won him the opportunity to embark on an adventuresome voyage into the Arctic. As an experiment, a couple of sealing ships were to be equipped with Marconi Wireless. On their expedition north it was suggested that one ship having the good fortune to find a large herd of seals could communicate with another vessel of the fleet to join in that location and take advantage of the good hunting. David Samoff, arriving at St. Johns, Newfoundland, in March, 1911, installed the equipment, and shoved off with the S.S. BEOTHIC into the frozen North. The venture proved to be a phenomenal success, for DS not only managed to get medical and surgical aid for a critically stricken comrade up there in that desolate waste, saving his life, but his ship came back with a record catch. Upon returning to New York, young Sarnoff had in his pocket the contract to equip the other ships of the sealing fleet!

The TITANIC disaster impressed upon the world at large the importance of Marine Wireless, and it precipitated the much needed legislation that made approved wireless installations maddatory on seagoing vessels with constant watch provided by two or more Operators on each Passenger Liner. This marked the turning point in the fortunes of the Marconi Wireless empire. To avoid costly patent litigation, the bankrupt De Forest-United Wireless competition sold out to the Marconi organization, delivering a score of land stations and some 400 ship contract installations. To meet the demand, a factory was established at Aldene, N. J., to build Marconi wireless equipment. Meanwhile, Marconi's success in spanning the Atlantic with the cryptic letter S in 1901 had encouraged efforts to establish Trans-Atlantic wireless communication in competition with the cables. By 1919, the high-powered spark stations established on both sides of the Atlantic were able to provide limited service, but could not be relied upon for continuous 24 hour duty. When atmospheric conditions interfered and additional power was employed in the effort to penetrate the static, frequent breakdowns were experienced, mostly because of the terrific impact of the spark system upon the oil-immersed condensers. Nevertheless, a handsome volume of traffic was being attracted away from the cables by the economical rates. But the Stock Exchange business, which demanded prompt and reliable service, could not be safely entrusted to the intermittant wireless system. Some of the other customers were becoming restless over the spasmodic service. Something had to be done, and nobody was more fully aware of this than the company's Commercial Manager, David Samoff.

Nikola Tesla's pioneer high frequency alternator of 1890 had been developed by Dr. Reginald Fessenden, Chief Engineer of the National Electric Signalling Company, with power raised to 50 KW. This model was submitted to the General Electric Company, whose Dr. Ernest Alexanderson scaled it up to 200 KW. Emerging as the Alexanderson Alternator, this powerful machine was substituted for the former Marconi spark transmitter at the Marconi Trans-Atlantic Station WII, New Brunswick, N. J., where it rendered reliable service to England, 24 hours a day, static or the aurora borealis notwithstanding. Immediately the British Marconi interests began negotiations to acquire this spectacular development for installation in the chain of high-powered stations in the World Wide Wireless system then under construction. They offered one million dollars for the patents.

At that point it was the United States Navy which entered the picture, urging that steps be taken to avoid allowing the British interests to wrest control of this important American development from its native land, and indeed gain control of world-wide wireless just as they had already acquired control of most of the world's cables. As Commercial Manager, young David Sarnoff had then found himself right at the vortex of the storm control controversy. At the instigation of the United States Navy, a conference was arranged between all those organizations interested, chaired by Owen D. Young, Board Chairman of the General Electric Company. As a result of these negotiations, it was decided to form an all-American corporation to acquire all the important radio patents in a common pool, issuing stock in the new organization to each of the participants in exchange for their patents. Thus would be ended the ruinous litigation over each other's patents which had plagued the various competing companies. In the process, the British interests which had controlled the Marconi Wireless Company of America would be paid off.

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DISTINGJUISHED VISITOR

David Sarnof gives his guest Guglielmo Marconi a guided-tour of the Station at Rocky Point during Marconis visit to the United States in 1933.

Mr. Sarnof died on Dec. 12th 1971 at the age of 80 years.

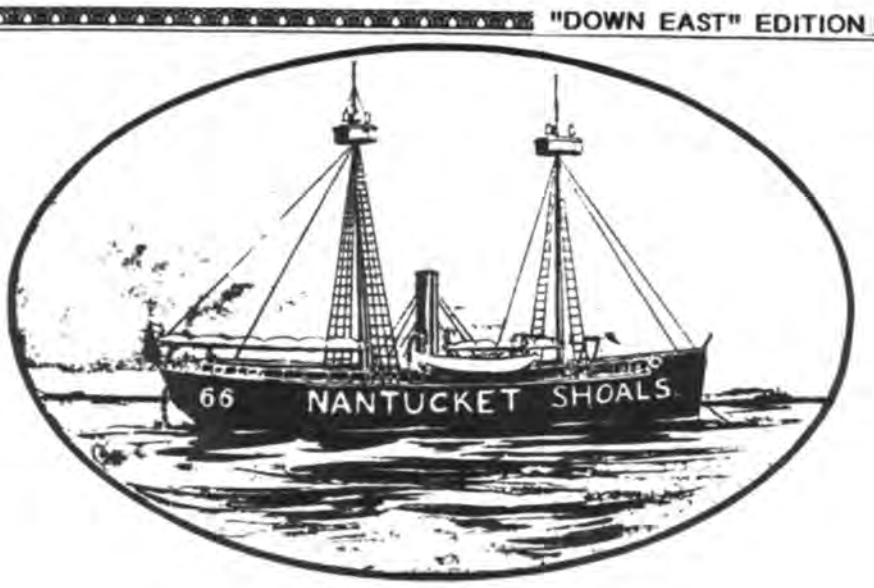
Thus was born the Radio Corporation of America, and the "wireless" industry in America got off to a whirlwind start as the radio industry. Samoff's spectacular rise to leadership was accelerated, and by 1930 the inevitable happened; the immigrant boy born in 1891 at the obscure village of Uzlian, Southern Russia, emerged as President of the organization which purchased all of Marconi's American interests! DS surrounded himself with the pioneers who had grown up with him in the spectacular wireless game, each in turn progressing to executive billets. Like their beloved leader, none of them ever lost his skill at the telegraph key. To the end, Samoff maintained a telegraph key with high-pitched buzzer in a convenient drawer of his desk, connected to similar facilities in the desks of the Old Timers around the vast Radio City complex in mid-Manhattan. Thus Samoff could always be in immediate touch with many of his important executives without having to rely on switchboard facilities and without the annoying delay of "busy" telephones. His activities in answering President Wilson's call during World War I to provide wireless facilities for the American armed forces had won him a commission as Lieutenant Colonel in the Reserve Signal Corps and his brilliant assistance to Owen D. Young, Chairman of the U. S. Reparations Commission in Europe after the conflict, brought him prominence in government executive circles. And when World War II again brought the need for his military services in communications he was promoted to the rank of Brigadier General, resulting in ever increasing responsibilities in Washington and overseas. Now he was General Sarnoff to all except his long-standing intimates. To them, on the intra-mural telegraph circuit, he would always be simply DS. (On the telegraph circuit of the RCA Laboratories I was Q.) Sarnoff enjoyed this method of keeping in close touch with some of the old-timers and what was equally important, they enjoyed this direct access to him. Even while simultaneously involved in an interview with some important visitor, it was not unusual for Samoff to engage in a conversation with one of his team over the telegraph line. An uninitiated visitor might wonder what the General was fiddling with in that desk drawer.

My reflections were suddenly interrupted when a very attractive lady appeared from within the silver-shingled cottage. I tried to explain the important reason for my uninvited presence. She was most gracious and cordial. Although she declined to let me photograph her and she asked me to refrain from revealing her name, she kindly took our picture with my camera as we posed before the historic Marconi station. I apologized for invading the privacy of her charming little retreat. Then we departed, following the trail back to Nantucket over which the teenage DS had so often pedalled his second-hand bike in the pursuit of knowledge.

--Cdr. E.J. Quinby, USN (Ret.)

THE NANAUCKET CONNECTION

The Inter-Island Steamer NOBSKA moored at the foot of main Street in Nantucket, unloading freight. Picture by "Jay Quinby"



Dreary Life Aboard a Lightship

A Glimpse of the Wireless Man's Life on the Nantucket Shoals Lightship, Anchored Forty-three Miles Out at Sea, Interminably Swinging, Swaying, Rolling and Pitching at the Mercy of the High Waves

IN our last issue we gave some of the details of the early days of the Siasconset Station, originally planned to receive reports of incoming vessels from the Nantucket lightship, anchored forty-three miles off the coast of Nantucket Island. This lightship is ever an object of interest to visitors, as it is one of the most admirably equipped vessels of her class in the world, besides being the last connecting link with the North American Continent seen by many outward bound passenger steamers, and the first to greet those coming from Europe.

At the time the wireless service was first installed on this vessel it was considered a great achievement, for it effectively solved the problem of reporting incoming steamers in ample time for friends of passengers to meet them at the pier. It had frequently been suggested that the Government should lay a cable from the shore to this lightship, which is in the steamer lanes on the line of the billowy highway followed by the great number of the transatlantic boats, but there was no practical way of permanently maintaining the cable connection as the lightship not only drags her anchor but also swirls in circles around it. It was readily seen a cable would be quickly fouled and destroyed, hence it was finally made clear that the sole feasible plan of sending this information to shore was by the use of a wireless system.

While it is an unusual thing for a season to pass without having the lightship break from her anchorage, on such occasions nowadays she is always able to return by her own steam; meanwhile, the extent of the damage is reported by wireless and if it is of so serious a nature that she has to put into port for repairs, a relief ship is summoned. One of these vessels is always kept equipped and provisioned at the station of New Bedford, Mass., ready to take her place at short notice. Everyone now realizes the inestimable benefit of having lightships equipped with wireless, but when it was first decided to establish the service, about twelve years ago, the scheme was vigorously opposed by many and the arrangements were so bound up in red tape that it took several months to obtain the necessary formal permission from the Lighthouse Board, a branch of the Treasury Department. To A. P. Nazro, then United States Naval Lighthouse Inspector for the Second District, belongs much of the credit for pushing the preliminary negotiations to a successful conclusion, for after he had made a personal examination he decisively reported that the instalment was not only feasible but generally advantageous.

The hardships these men are forced to endure can only be fully understood after a visit to the ever restless Nantucket lightship. Swinging and swaying, rolling and pitching, yet never getting further from the spot—that is perhaps the dreariest thing about life aboard these Government vessels. On an ordinary ship, no matter how dreary the horizon, even if you be sailing through mist and sleet, you are at least getting somewhere. There is a harbor ahead for which you are laying your course. But as old Oliver Coffin, who had made many whaling voyages up to the Arctic, said: "On the Nantucket lightship you never gets nowhere."

Too true. Swing, swing; sway, sway, roll, roll; pitch, pitch; and always just the same distance from Sankaty ahead. Nantucket Island, with nothing but white crested breakers to the westward, and the ocean, clear across to Spain to the eastward. The glad cry of "Land, ahoy!" never resounds from the look-out of the Nantucket lightship; she is anchored so far out that even the island from which she takes her name is below the horizon.

One who has spent considerable time as a visitor aboard this ship tells of an incident that is almost pathetic. One day the lookout came to the hatch and sang out, "S'conset!" How the crew tumbled out on deck! When the visitor got there, they were all at the rail straining their eyes in the direction of Nantucket Island, and there, sure enough, by a trick of mirage, seemingly not more than a few miles distant was Sankaty Head and the fishing hamlet of Sankaty, with everything so clear and distinct you could count the dories on the beach. Then it all faded away and there was nothing left but the ridge of breakers. The effect on the crew was immediate.

Where all had been strain and excitement, there was a sudden giving way to the tension, a drooping of spirit, a slackening of physique, a downcast air, which told of aching hearts. They had had a glimpse of home, but what a cruel glimpse! For here they were miles away and months apart from it.

The contrariness of lightship motion is something almost impossible to describe. If you can imagine a bucking bronco which bucks and rolls at the same time, you can get some idea of it. A lightship is like a vessel dismasted, rudderless and absolutely at the mercy of the sea. She simply rolls around her moorings.

One moment she may be on the crest of a wave, the next moment in the trough of the sea; one moment on an even keel, the next she will get up on her hind legs and scream, then plunge forward and buck into a wave; then roll and stagger, and so things go on, year in and year out with the men as helpless to guide the craft as if they were on a wreck.

During the winter season it is often necessary for both officers and crew to take their meals standing up. A basket is swung in a convenient place and the food prepared in the galley is put into it so all can help themselves. Then to the accompaniment of a howling gale and driving sleet, these men gulp down their sustenance as best they can. Few of we landlubbers would care to go through the experience of spending six months aboard one of these vessels, but somehow the applications for positions aboard Government lightships are always far in excess of the supply.

The Fabulous RADIO NBD

BAR HARBOR STORY

Otter Cliffs
ACADIA NATIONAL PARK

By
Brandon Wentworth

PREFACE

OF THE THOUSANDS of people who visit Acadia National Park each season, many enjoy the scenic Ocean Drive on Mount Desert Island. On this drive, after passing Otter Cliffs, one comes to a Park Service road sign which reads: *Fabbri Memorial*. A few yards beyond is the memorial itself, a large monument of red granite with a bronze plaque insert inscribed to the memory of Lieutenant Alessandro Fabbri.

Lieutenant Fabbri was awarded the coveted *Navy Cross* by President Woodrow Wilson at the end of World War I for creating what was considered to be the most important and the most efficient radio station in the world.

Herein is the story of how and why Lieutenant Fabbri conceived and developed this fabulous station as his patriotic contribution to the War effort. To my knowledge it is the only concise, most factually accurate, comprehensive, illustrated history ever published about the old Otter Cliffs Naval Radio Station NBD.

Much of my story deals with the actual experiences of the Navy radiomen who operated the station and leaders of the radio communications industry who built it. The story also goes into technical descriptions of the radio equipment and antenna systems the way they were from 1917 when America entered the War until several years after the Armistice. I hope to be forgiven for being carried away by some of the operator quotes about the old arc and spark transmitters. My interest in this antique radio gear stems from spending summers while attending Stanford University and for sometime after graduation as a professional wireless telegrapher aboard ships of the U.S. Merchant Marine. That was between 1924 and 1929. And it was during those years that I became intimately acquainted with shipboard versions of arc and spark transmitters. I operated both types, as one or the other was installed on the various vessels on which I served.

To lend further credence to the authenticity of this historical account, I can add that I've been a radio ham for over sixty years, from 1920 to the present. Also, I was a radio officer with the Army Air Corps throughout WW-II; and later an electronics engineer with the Federal Aviation Administration for twenty-two years until retirement. I'm now a year-round resident of Southwest Harbor, Maine.

The greatest reward to me from this story will be *recognition* by those who read it of the *Fabbri Memorial* and the old time top flight Navy radio operators and brilliant engineers who made it all possible.

HISTORIANS TELL US that the little town of Bar Harbor on Mount Desert Island, Maine, became popular about the turn of the century as a summer resort for the rich and enormously wealthy. Such financial giants as J.P. Morgan, Andrew Mellon and George Vanderbilt spent the summer time there in company with steel magnate Andrew Carnegie and other industrial tycoons of that golden age. They came to play and frolic, to escape the big city turmoil, to enjoy the Island's delightfully cool fresh air and to engage in a social whirl to eclipse all others. Extravagant parties were the vogue, staged at million dollar castle-like summer "cottages" and aboard palatial yachts. It is said that J.P. Morgan's sleek, black, 406' steam yacht *Corsair* was a sight to behold, riding at anchor in the town's crowded harbor. The loveliest ladies of high society summered there too, including Mrs. John Jacob Astor, Barbara Hutton and Evelyn Walsh McLean who dazzled them all with her *Hope Diamond*.

Bar Harbor holds another claim to distinction, less glamorous perhaps, but vastly more rewarding to our nation's well-being. It was the site of "the most important and the most efficient 'radio' station in the world"—and here is how it all came about:

One other well-to-do socialite and yachtsman who spent the summers at Bar Harbor was a Mr. Alessandro Fabbri. He resided in a sumptuous shore front "cottage" on Eden Street, five miles north of Otter Cliffs, a high rocky promontory which juts boldly out into the Atlantic. Mr. Fabbri was not a playboy as were many of his contemporaries. Instead, he devoted much of his time to scientific endeavors, one of which was experimenting in wireless telegraphy. It became his principal hobby.

Sometime prior to WW-I, through knowledge he gained from studying the writings of one Hugo Gernsback and other authorities on the subject, plus invaluable assistance rendered by Mr. Ralph Tabbut, a prominent Bar Harbor radio amateur, circa 1912, Fabbri built himself a very elaborate wireless station. The transmitter, receiver and aerial system he constructed from a selection of coils, inductances, spark gaps, transformers, condensers, crystal detectors, switches, ear phones, wire, insulators and a telegraph key purchased in New York and Boston. Mr. Tabbut helped him to put it all together and to string several long experimental antennas between tall spruce trees adjacent to his cottage. His ground system was the Atlantic Ocean.

To find out, among other things, how Mr. Fabbri learned the code I corresponded at some length with Ralph Tabbut. He replied, "On learning the code I do recall that he (Fabbri) and his brother Ernesto used a couple of buzzers and sent to each other for practice."

A word on Ernesto: Bar Harbor social registers have it that he was a partner in the House of Morgan, J.P.'s New York banking empire. His principal hobby was said to be yacht racing.

Ralph also told me that, "In those years there were only a few amateur, or ham stations around and distances between them were short. I recall that Fabbri, in striving for greater distances, began working ships at sea. One night when I was over at his house he worked an ocean liner headed for Europe. I don't remember the name of the passenger vessel, much less her call sign. That was certainly a long time ago wasn't it? In fact it was even before we had to have an amateur license!" Incidentally, when amateur licenses were first issued in 1912, Mr. Fabbri's was the tenth, with the call sign 1AJ.

Ralph's recollection of that ocean liner contact seems to reveal that Mr. Fabbri's interest in wireless communication may have stemmed from his many Atlantic crossings on what was said to be his favorite passenger ship, the North German Lloyd luxury liner *Kronprinzessin Cecilie*. Probably, as a fugitive from utter boredom, or business worries, he spent most of his time on the bridge chatting with Captain Charles Polack and his deck officers, or in the ship's radio room listening to incoming signals, conversing with wireless operator Simoni and watching him pound out the many messages. As a result, Mr. Fabbri apparently became quite well acquainted with Simoni who had been "sparks" on the *Cecilie* since her maiden voyage from Bremerhaven to Hoboken in 1907 and from whom Mr. Fabbri undoubtedly picked up much expertise in the art of professional wireless telegraphy.

On August 3rd, 1914 Great Britain declared war on Germany. The very next day, at the first break of dawn, the *Kronprinzessin Cecilie* came steaming into Frenchman Bay and dropped her anchors less than a half mile off shore from Mr. Fabbri's Bar Harbor cottage. She had taken refuge in neutral waters to escape the British battle cruiser *Essex* which had chased her half way across the Atlantic. The escape was heralded by newspapers at the time which reported that the *Kronprinzessin Cecilie* was on a voyage from New York to England with a cargo of $10,600,000 in gold bullion and $3,000,000 in silver bars. There were 1,216 passengers aboard (Fabbri was not among them). When two days out of Southampton her wireless operator intercepted an exchange of messages between a British warship and a French warship saying that the *Cecilie* was "close by" and that she was "The finest prize ever open to capture." This alarming intelligence plus a coded message reportedly received moments later from the vessel's owners in Bremerhaven, ordering her to return to New York, caused Captain Polack to turn his ship about immediately and run for it! She proceeded westward under forced draft. She ran totally blacked out at night, thru dense fog day and night at her maximum speed of over 24 knots. Passengers were said to be absolutely terrified as even the fog horn was silenced. To add to their fears, they were neither told, nor did they have the faintest suspicion where the ship was bound, until Mount Desert Island and then the Bar Harbor shore line loomed up through the early morning mists.

Why did Captain Polack choose tiny Bar Harbor as a haven of safety when the big ports of Portland, Boston and New York were on course, virtually dead ahead? Had he been warned of a blockade? Or, was it possibly because of his close acquaintance with Mr. Fabbri? In either case, one of his passengers was said to be C. Ledyard Blair, a wealthy New York broker and local yachtsman, who was able to pilot the big ship safely past Egg Rock, on up Frenchman Bay and into Bar Harbor. The passengers immediately disembarked and the gold bullion and silver were transported ashore by the revenue cutter *Androscoggin*.

Then, according to downeast chroniclers, the good people of Bar Harbor, including Mr. Fabbri, lavishly wined and dined Captain Polack and his officers during their forced sojourn in Frenchman Bay. It is reported that Mrs. Fabbri bought out the Star Theatre twice a week for the crew of the *Cecilie*. One may surmise that all hands were suitably entertained by such ancient thrillers as, *"The Clutching Hand"* or, *"The Perils of Pauline."*

Early one cold morning in November the *Kronprinzessin Cecilie* put to sea again, but under escort of two U.S. Navy destroyers. The proud vessel's next port o' call and what became of her afterward is another story, best told by Sandra Paretti in her historical novel, *The Magic Ship*.

Some two and a half years later, on April 6th, 1917, the United States of America declared war on Germany. Since Mr. Fabbri was beyond the gob or doughboy enlistment age, he decided he could best serve his country by donating both his yacht, the *Ajax*, and his wireless station to the Navy. He would upgrade the station consistent with the most advanced state of the art at his own expense.

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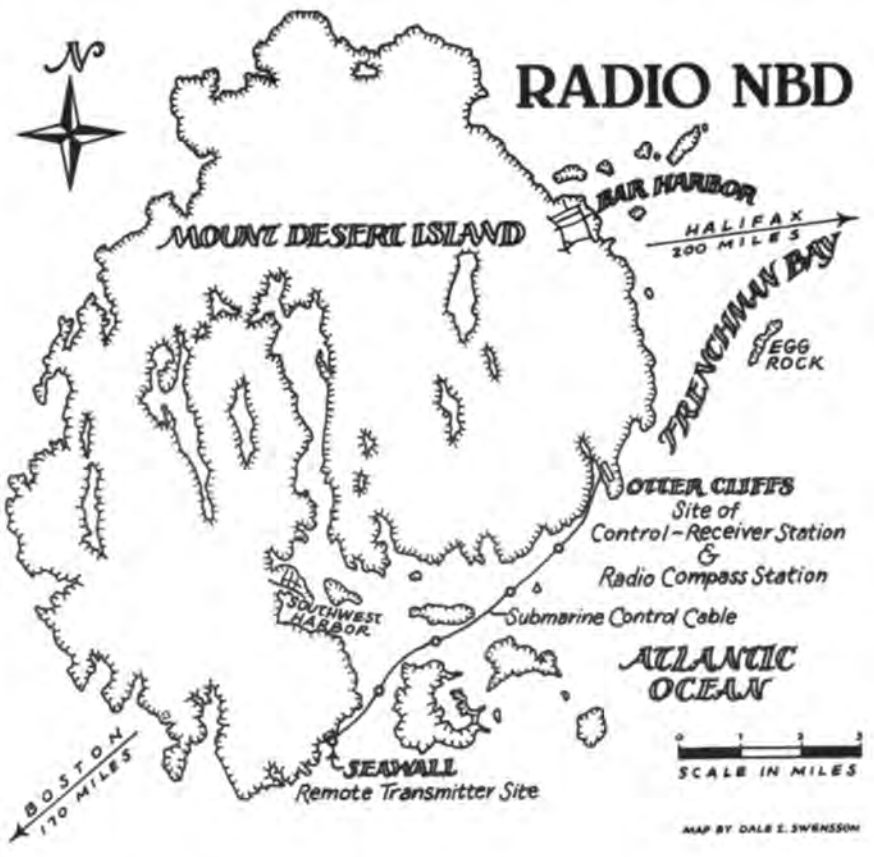


The Navy was quick to accept the yacht, a Gloucester fisherman type hull, 125' overall, 23' beam, 14' draft and 200 tons displacement. She was rigged as a gaff-headed ketch and sported a diesel auxiliary engine. However, the wireless station offer encountered difficulties.

Mr Fabbri, to assure that his patriotic gift would be manned by experienced operators as efficient as the station he planned to build, and not by a bunch of "lids," or novices, asked that he be named station manager. He was advised by Navy brass in Washington that civilian management of such a communication facility in war time was strictly against Navy policy. If he wished to be placed in charge of the station he must at least achieve the rank of ensign in the Naval Reserve. That was understandable. Hence, Fabbri immediately applied for the required ensign's commission.

His application, in due time, was returned, marked DISAPPROVED, with no reasons whatsoever given for the rejection. The several special trips he made to Washington to try to find out *why* his application was turned down were to no avail. They got him exactly nowhere.

Evidently, Mr. Fabbri was a man of grim determination. Although bitterly discouraged, he didn't give up. In becoming a millionaire he discovered on many occasions that it is *who* you know rather than *what* you know that often turns the trick. So, as a last resort he called on an old friend and wealthy neighbor, a fellow yachtsman and summer resident of nearby Campobello Island, a gentleman named Franklin Delano Roosevelt, then Assistant Secretary of the Navy. The immediate action taken by Mr. Roosevelt promptly won Fabbri a commission as ensign in the United States Naval Reserve Force.

Then, about the end of May, he went up to the Wireless Specialty Apparatus Company in Boston and, with their chief engineer, Mr. J.A. Proctor, selected the most modern equipment available which included a 1 kw spark transmitter complete with quenched spark gap and Dubilier mica condensers.

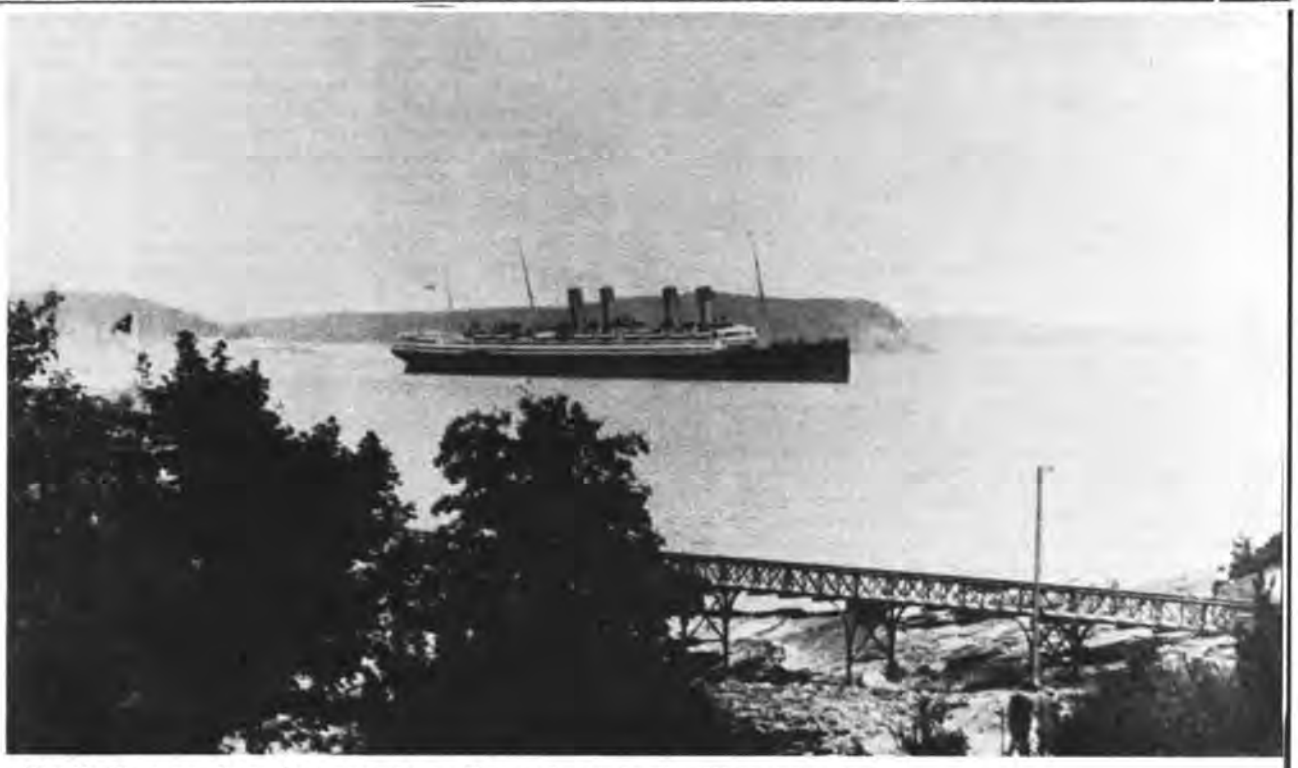
Shortly thereafter, on June 12th, Mr. Proctor, in company with Navy Lieutenant Henry Gawler, went downeast to Bar Harbor. Gawler, as a civilian in peacetime, was the first U.S. radio inspector at District Office #1 in Boston, as established on July 1st, 1912 by act of Congress. It was Proctor who engineered the United Fruit Company's Tropical Radio Telegraph station WBF (originally, the station was installed atop Filene's department store in downtown Boston). These gentlemen, two of the most knowledgeable in their field, tested many locations for the new Bar Harbor radio station. They finally picked out a site on the Otter Cliffs promontory near the Otter Creek side which would be quite well shielded by spruce trees from any curious U-boats cruising off shore. As the site was leased by its owner to the Bar Harbor Country Club, Fabbri subleased it lock, stock and barrel for the Navy. The lease included a fine old club house which too became part of the Otter Cliffs radio station.

On May 29th, 1917 one of the first professional "brass pounders" arrived on the scene. He was Navy Radioman Herbert C. Hovenden. I am greatly indebted to Mr. Hovenden for much of the documentary material contained herein. Hovenden's first duty assignment was to staff the amateur radio station of Arthur Lawford which had been taken over by the Navy. It was located at 292 Main Street in downtown Bar Harbor. The station had a 1 kw transmitter with a rotary spark gap. Hovenden tells us:

"There were four operators who covered a 24-hour watch; Navy Radiomen J. Albert Stevens, Paul D. Sullivan, Chesleigh C. Chisholm and myself. The station neither received nor sent any messages for local (Navy) headquarters because we had a direct telegraph wire into the Boston Navy Yard. Our daily duty was to report to another amateur station (also Navy takeover) at Machias or Eastport, with a 'P O M S A T' which meant, 'Personnel-Operations-Material are functioning SATisfactorily.' They reported the same to us. We logged everything we heard but transmitted nothing except the above report. The call sign for Machias was AA3 and for Eastport AA4. Ours was AA2.

"One morning toward the end of August we heard a station calling Radio NAD, the Boston Navy Yard and using *our* call sign AA2! It turned out to be the new radio station down at Otter Cliffs. They were doing a little testing. We heard Boston report their signals as 'very strong'.

"On August 24, 1917, Washington assigned Navy Chief Raymond Cole to Bar Harbor to assure that all Navy legal and operational practices were observed at Otter Cliffs since he would be the only one there with long practical experience in Naval radio communications. Furthermore, Cole would be the only *regular* Navy man at the station—the rest would be Naval reservists (USNRF). He found the station nearly completed and all work



North German Lloyd luxury liner Kronprinzessin Cecille at anchor Bar Harbor, Maine, August 4 1914. Picture courtesy Bar Harbor Historical Society.

progressing satisfactorily. The station was formally commissioned on August 28, 1917 at twelve noon sharp. The Bar Harbor station was simultaneously closed and the operating staff transferred to Otter Cliffs along with the call sign AA2, soon changed to K2B and eventually to NBD.

"During the commissioning ceremonies, conducted by Cole, Ensign Alessandro Fabbri stood by as the happiest of spectators. He then took over as 'officer-in-charge' and Chief Cole became his Executive Officer. Cole, commensurate with his greater responsibilities and the vital importance of the Otter Cliffs assignment, was advanced to the rank of 'Gunner' on September 24, 1917."

The Bar Harbor Historical Society Museum has in its archives copies of the old periodical *Acadian* in which there appears in serial form almost all of Mr. Fabbri's official correspondence with Washington. Several of his letters reveal the exasperating and highly discouraging runaround he endured at the hands of Washington bureaucrats in his determined fight to secure a lowly ensign's commission. He won it only when his good friend Franklin Roosevelt effectively came to his aid.

Some of his other letters tell of the early happenings at Otter Cliffs. In the interest of brevity I have paraphrased one of them as follows:

"The first of the new receiving equipment has begun to arrive. One item which the Navy sent us has been nicknamed by one of our operators as the 'audion on a shingle.' The term was coined in praise and not in any derogatory sense because this vacuum tube, a de Forest audion, and its oscillatory circuitry has given us our first capability of undamped (CW) signal reception. The first station heard was the powerful arc transmitter of Radio POZ in Nauen, Germany. Thus, we are now in the 'arc' reception mode of operation. To demonstrate, we telephoned the Wireless Specialty Apparatus Company in Boston the other day and asked them to listen carefully. We then placed a Baldwin mica diaphragm earphone on the mouthpiece of the telephone. Company personnel reported they could hear the signals from POZ eight feet from *their* telephone receiver!"

Mr. Hovenden has made available to me some of Raymond Cole's old personal records from which the following is quoted:

"By early 1918 we were copying news and other broadcasts from POZ and message traffic from station IDO in Italy and YN in Lyons, France. This latter station was sending five-letter code messages to us daily on a 24-hour basis. Our 1 kw spark transmitter was installed and ready for operation, but quiet most of the time; until December 7th, 1917 when Otter Cliffs received an urgent telephone call from the Boston Navy Yard asking that we try to contact Halifax, Nova Scotia. They had a report that an explosion had occurred there. We had strict instructions to use only the 'lead backed' four letter code book always at our left side—but, in this case, we were allowed to use the peace time Halifax call letters, VCS and to use plain English. This was because they didn't have our code. Boston had called VCS repeatedly and couldn't get an answer. We called once. They answered and said their antenna towers were almost demolished and they were using auxilliary power. They then told us there had been a terrific explosion in the harbor which had leveled a good part of the city. We reported this to the Boston Navy Yard who immediately dispatched the hospital ship *U.S.S. Colony* with doctors, nurses and medical supplies to Halifax. Later, in contacting a sailor who was on another nearby ship by letter, he reported that this move was undoubtedly of tremendous help to the people of Halifax."

We recall what happened. The French munitions ship *Mont Blanc*, laden with 2,300 tons of picric acid and 3,000 tons of TNT was rammed by another vessel and blew up, right in the harbor. Half the city was left in ruins. Over 2,000 lost their lives.

To further paraphrase Fabbri's letters to Washington, he reports: "Our trans-Atlantic traffic is increasing and our Washington wire is kept very busy. Our daily 100% reception of YN in France throughout the 24 hours continues. My operators are doing a magnificent job especially when considering we are a receive-only station. Coded messages are sent to us each word *once*. Hence, the radioman on duty must 'get it' the first time or else! There is no opportunity for him to break-in for fills or repeats."

To shore up Otter Cliffs' transmission capability "just in case," the Navy replaced the 1 kw spark transmitter with a 5 kw set.

Fabbri had an older brother, Egisto. Not to be outdone by Alessandro he put up the money for construction of a tall lighthouse-shaped building to be located on the highest elevation of the Otter Cliffs peninsula. From the cupola of the structure one could enjoy a superb view of Frenchman Bay and the ocean beyond to the southeast. This lookout tower and a high barbwire fence around the station perimeter were Radio NBD's only security precautions against lurking enemy vessels and saboteurs.

In addition to information from Herbert Hovenden, Raymond Cole and Fabbri's letters, much herein was contributed by Frederick Grindle to whom I was referred by the curator of the Bar Harbor Historical Society Museum, Gladys O'Neil, as the gentleman who "knew all about" the old Otter Cliffs Naval Radio Station.

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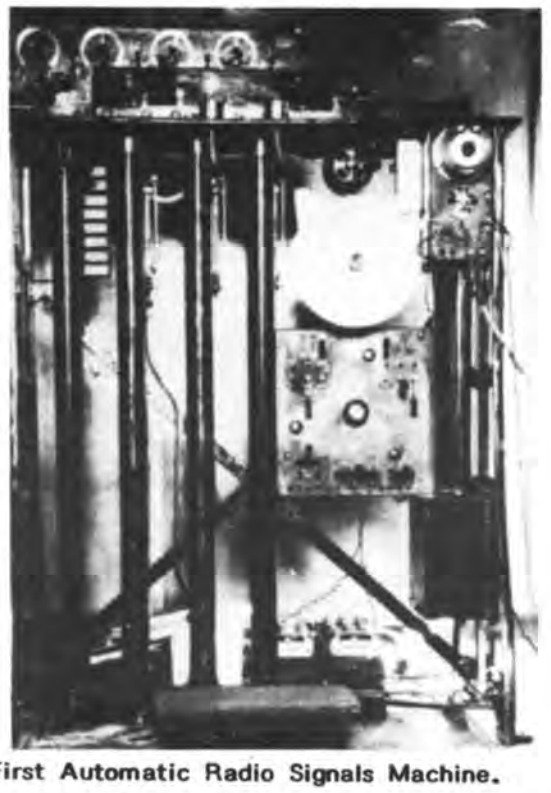
The Bar Harbor Country Club building leased by Mr. Fabbri for use as NBD control and receiver station. *Photo courtesy Carl Herr.*



First Automatic Radio Signals Machine.

Invention of Prof. Hoxie of General Electric Co. to record incoming signals graphically we tested at Otter Cliffs Naval Radio Station in 1928. Incoming signals were recorded as dots/dashes on tape and had to "read"---translated into type. Picture from Carl H. Herr.

NBD -Bar Harbor

(Continued from Page 31)

thru a tiny slit onto a moving sensitized paper tape. The tape was then run thru four long tubes; the developing tube, the fixer tube, the washer tube, the drying tube and then out. The tape was then read and translated by an operator from dots and dashes to numerals or letters on a typewriter. The operators were referred to as 'tape worms.' Although we made readable test tapes up to 900 WPM, we never actually recorded any incoming signals at over 45 to 50 WPM. You see, we had information that enemy submarines were transmitting their position and other reports at ultra high speeds – too fast for manual copy. But the U-boats we monitored were never able to attain any such speeds on their high power long wave transmitters, though if they ever did we were sure ready for 'em!"

She was right. I found Mr. Grindle at his home in Bar Harbor. He told me he had served under Lt. Fabbri from the station's inception in 1917 until the end of 1921. He said he began as a telegraph operator at Otter Cliffs. Soon after he was promoted to "wire chief," in charge of the land line terminal in downtown Bar Harbor. It seems that all message traffic received by radio at Otter Cliffs was telegraphed via the terminal to Washington, by Morse wire. The return traffic to Radio YN in France was transmitted by the high power, long wave Naval radio stations NAA in Arlington (VA) and NFF in New Brunswick (NJ). Radio YN of course was the message traffic terminal for the American Expeditionary Forces in France.

Fred Grindle had another important responsibility at NBD. He was placed in charge of the very first high speed radio recording machine. The device was invented by a Dr. Hoxie of the General Electric Company. It was designed to record signals up to 1,000 words per minute. In Fred's words, "The recorder required some skill in making adjustments to the speed of the sender, adding tape while in operation and generally knowing how to keep it running smoothly. It worked like this: The incoming signal actuated a tiny mirror which reflected a light beam

Barbwire security fence, Otter Cliffs. Note telegraph pole line at right and antenna towers in distance. Photo coutesy Carl Herr.

Again from Fabbri's letters: "Night before last we intercepted a message from one European station to another on 4,000 meters. The suffix was, 'Please transmit this message to President Wilson since we have no direct means of radio communication.' We copied the message solid and had it in Washington within five minutes!" About mid-1918 Fabbri adds: "Handling over 20,000 words a day from Radio YN. A good percentage is in cypher. We are told that no other U.S. station is receiving YN on a solid day-to-day, around the clock basis."

With all that heavy traffic in coded and cypher messages coming in from YN, one can well imagine NBD was the key link in the "hot line" between President Woodrow Wilson and John "Blackjack" Pershing, Commanding General of the AEF. By early 1918 jamming loomed up as a serious problem. Oddly enough, the person to solve it was Dr. E.F.W. Alexanderson, the same genius who invented a transmitter powerful enough to jam every long wave receiver on earth. His solution is described in a letter, dated August 26, 1964 from Dr. H.H. Beverage to Herbert Hovenden. Here is the letter (in part):

Dear Mr. Hovenden:

Herewith are some notes relative to my activities at Otter Cliffs during World War I. Following a year as a testman at the General Electric Company, I was employed by Dr. E.F.W. Alexanderson in his radio laboratory in Schenectady and assisted in developing the long wave system based on the Alexanderson 200 kw alternator. My specialty was the development of a receiving system for the long waves.

In 1917 there was concern that the Germans might cut all of the trans-Atlantic cables and jam reception of American radio stations in France, thereby cutting off all communications between Washington and the American Forces in France. The problem presented to Dr. Alexanderson was to devise a receiving system that could be located in France with the capability of balancing out any jamming of the American stations by radiation from Germany. In addition, it was desired that the system should have two nulls* so that a transmitter could be erected somewhere in France to "barrage" jam the German receiving stations, without jamming our stations, thus preventing them from receiving the American radio signals. Hence the system was called the Barrage Receiver.

The Navy was greatly interested in both the anti-jamming and directional features of this antenna system and requested Dr. Alexanderson to have his Barrage Receiver installed at Otter Cliffs. I was the one to whom he assigned the job which as I recall went something like this:

During a rainy week at Otter Cliffs, I dragged rubber covered wires thru the woods and underbrush for two miles in opposite direc-

*A null is a characteristic of certain type antennas whereby minimum, or no signals at all, are received from a predetermined direction.

According to Fred Grindle this is a true copy of the first German "surrender" message. Fred should know as he was there and has an original copy framed on the wall of his ham radio shack in Bar Harbor. It bears the endorsement, "Copied at Transatlantic Naval Radio Station, Otter Cliffs, Bar Harbor, Maine." He made a Xerox copy for me from which the above is transcribed. Incidentally, according to Fred, Germany had no alternate direct circuit routing for the message since the British Navy had cut all cables connecting the U.S. with Germany early in the War.

There is another rather ironic twist to this tale. It seems that German Telefunken interests built Radio WSL originally, at Sayville, Long Island (NY). About 1916 the station was taken over by the Navy. In 1918 a long wave 200 kw arc transmitter was installed and operated under the new call sign NDD. So, when the POZ operator called "WSL" with the first peace message that evening he was apparently unaware of this call sign change. His call book undoubtedly still listed the former Telefunken station as Radio WSL.

Mr. Grindle has another document framed on his wall. It is a citation addressed in large capital letters to FREDERICK GRINDLE. It spells out at great length all the many outstanding accomplishments of Radio NBD from August, 1917 thru December, 1923. It ends with the following:

"Such pioneering achievements were the result of hard work, exceptional skill, imagination, initiative and devotion to duty in keeping with the highest tradition of the Naval Service. Well done.

/s/ Rear Admiral Robert H. Weeks
Commander
Naval Communications Command
Washington, DC."

On one of my recent visits with Fred Grindle at his home in Bar Harbor we talked a little about his old friend Ralph Tabbut. Fred told me, "You know, Ralph and I were neighbors here. We lived in the same block when I was a kid. That was around 1912. When the War came along he tried to get into the Navy but was turned down. They discovered some physical disability. Too bad. He was really a great operator. He taught me a lot about wireless too, but I didn't get into it right then. Instead, I got my start in life as a Western Union messenger boy. I remember delivering hundreds of messages to the bridge of the big German four-stacker *Cecilie* while she was anchored down here in the harbor. That was way back in August, 1914. She came in here early one morning to escape an English warship, and I believe a French warship too, that had been chasing her. Golly, that *Cecilie*! She was sure a beautiful ship. I was aboard her many times delivering all those telegrams. She stayed here about three months as I recall." Then I asked, "By the way Fred, who do you suppose was the Captain's Bar Harbor friend who decided him to put in here that morning?" He replied without a moment's hesitation, "Fabbri."

With all the sophisticated antennas installed at Otter Cliffs, including the "barrage receiver" Beverage and several 30' high by 90' long vertical loops, plus the efficient receivers which these antennas served, that 5 kw spark set was like the proverbial bull in a china closet. A spark transmitter of that magnitude, if operated in the midst of highly sensitive receivers, would completely jam any and all incoming signals, no matter how strong. Gunner Cole decided well before the Armistice they'd better do something about it. So, he selected an area at the southern end of the Island, between the ocean and a salt water swamp, at a place called Seawall, some six air miles southwest of Otter Cliffs. Here the Navy built a remote transmitter site.

The antenna was a 400' flat top supported by two 220' guyed, wooden lattice-work towers. The ground system consisted of a 20' square heavy copper wire grid extending some 225' beyond each tower. All wires were bonded and those on the southeast side extended into the ocean. A two story building was constructed to house the equipment which included a newly acquired arc transmitter, two motor generators and the 5 kw spark set. The transmitters were controlled from Otter Cliffs thru a submarine cable. Both the arc and spark transmitters were placed in full operation immediately after the Armistice. According to Gunner Cole, the range of each transmitter was "most remarkable."

After the Armistice, NBD's message traffic instead of slowing down accelerated rapidly. On January 25th, 1919, Gunner Cole was transferred to sea duty as Radio Material Officer on the big German vessel *Vaterland*, taken over by our Navy and renamed *Leviathan*. In one of his letters he wrote: "We called Otter Cliffs to make sure the 'regulars' were available. They were there, ready and standing by. We then sent 1080 messages in less than 24 hours. I batted out over 250 of them myself. On that one trip to New York the *Leviathan* carried 17,000 returning troops!"

Otter Cliff lookout tower. It became NBD Radio Compass Station after the war. Photo courtesy Carl Herr.

"Gunner" Raymond Cole. Became a full Commander at the end of WW-II when he retired from the USN. Cole was assigned by the Navy as Chief on the USS Leviathan-WSN when the Navy took over the ship from the Germans.

Again on March 31, 1919, Fabbri reported: "In two hours we have taken nearly 200 commercial messages from the *Leviathan* when she was 1,000 miles out of New York." He adds: "Most inbound ships clear their traffic through Otter Cliffs where reception is usually better than at other stations along the coast." By then, Fabbri had been promoted to a lieutenant in the U.S.N.R.F.

May 8 to 31, 1919, witnessed the first successful west-east trans-Atlantic airplane flight. It was made by U.S. Navy Lieut. Cmdr. Albert C. Read and crew from Rockaway, Long Island to Plymouth, England in the seaplane NC-4; flying time 52 hrs, 31 mins. On May 17th, according to Fabbri, Radio NBD was in continuous direct two-way communication with NC-4 cruising at 10,000' on the leg between Trepassey Bay, Newfoundland and Horta in the Azores, a distance of some 1,000 nautical miles. The aircraft was equipped with a ½ kw spark set. Radio operator aboard was Ensign Herbert Rodd. Mr. Roosevelt sent a congratulatory message to pilot Read and crew via Otter Cliffs. An acknowledgement was back in Washington in three minutes, according to Fabbri.

The latter part of June, 1919 found President Wilson enroute Europe on the *U.S.S. George Washington* to sign the peace treaty. According to Mr. Hovenden, Otter Cliffs, using the remoted arc and spark transmitters at Seawall, handled a large number of messages for the President and his staff. On his return voyage the President authorized the skipper of the *George Washington* to prepare a letter of commendation, the text of which is quoted as follows:

During the voyage of this vessel, carrying the President from Brest, France to Hoboken, New Jersey, a tremendous amount of message traffic was handled by Navy Radio, Bar Harbor, Maine. The operators on duty showed a perfect knowledge of regulations and their efficient operating was a great help in rapidly clearing the President's traffic.

/s/ Woodrow Wilson
By: Direction

E. McCauley
Rear Admiral USN

The letter was sent to Charles B. Ellsworth, Chief Radioman, NBD.

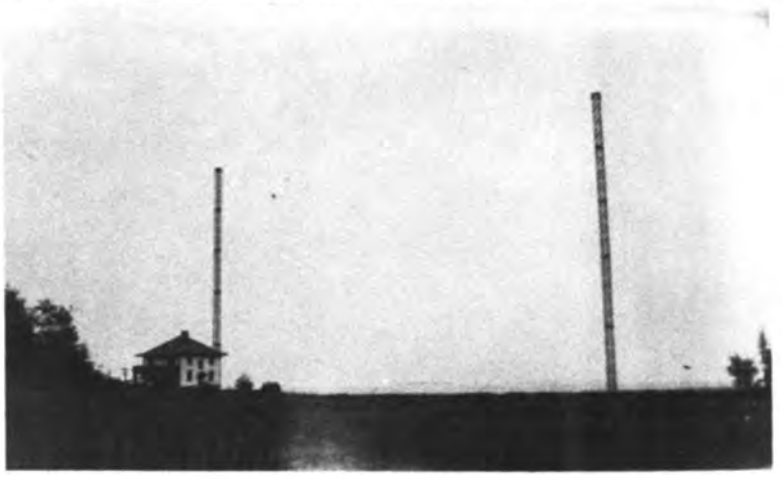
The chief radioman on the *George Washington* was said to be Fred Schnell who later became prominent as traffic manager for the American Radio Relay League. On May 28th, 1919, Fabbri wrote a letter to Lieut. Cmdr. A. Hoyt Taylor in Washington. At that time Commander Taylor was the Navy's Trans-Atlantic Communications Officer. The letter read: "Trans-Atlantic reception has been very satisfactory for the past many months. We have received as high as 28,000 words in one day – words *once*, without repeat. Our best record of traffic is 54,000 words in 48 hours, including 1,003 messages from ships, Government and commercial. As you know, Radio NSS at Annapolis with their new high power 500 kw arc installation is now our principal American transmitting station for European traffic." A few months later, according to Fabbri, the traffic totals had risen to several times that figure and the station had grown to a complement of 170/180 men, excluding officers.

Again we quote from Mr. Hovenden: "Otter Cliffs became the Navy's principal receiving station for trans-Atlantic messages. Ingenius systems of directional loop antennas, counterpoises and submarine ground wires were added; each serving a separate receiver installed in a separate building. Each receiver was for a specific European station – some transmitting on a definite schedule. Messages continued to be forwarded to Washington, New York and other addressees by land line telegraph."

Here is a confirming quote from a Navy Department historical publication of 1922: "After Otter Cliffs had been properly equipped and new circuits installed, the copy made at that station was so certain that the Belmar (NJ) receiving station was, in February, 1919, closed and returned to the Marconi Company. Combined with the advantages due to the geographical location of Bar Harbor, the station there was amply able to care for trans-Atlantic copy."

In sifting thru the voluminous amount of reference material for this narrative, I came across several conflicting reports on the power rating of Radio NBD's arc transmitter. So, to set my record straight, I called on Ted Hancock of Southwest Harbor, a village three miles north of Seawall. Mr. Hancock was a Navy radioman assigned to duty at the Seawall remote transmitter site from 1923 to 1925. He told me the arc was a 12 kw transmitter. To prove it, he picked up a pair of scissors and cut a *captioned* picture of the rig out of his old photograph album and graciously handed it to me with, "Here, you keep it." Of course I thanked him profusely and then asked Mr. Hancock what duties he remembered best about Seawall. He replied more or less as follows: "Well, I still recall several. One was to make sure the drip cup above the arc electrodes was kept filled with alcohol and that the drip rate was proper. That arc in order to generate low frequency radio

(Continued on Page 34)



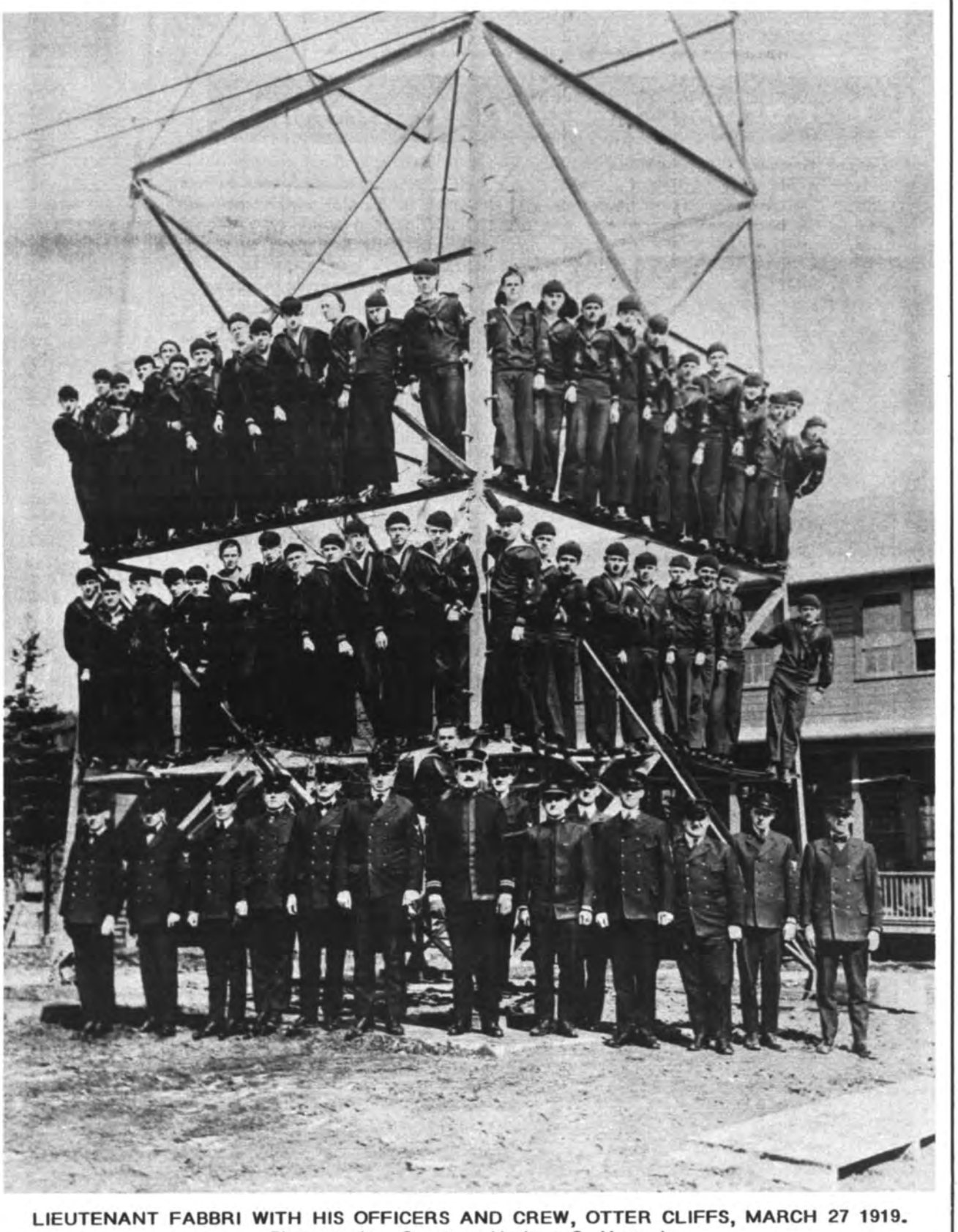
NBD TRANSMITTER SITE at SEAWALL.
Photograph courtesy - Carl Herr.

SEAWALL REMOTE TRANSMITTER SITE
IN WINTER. Photo - Courtesy Ted Hancock

LIEUTENANT ALESSANDRO FABBRI
- Photo, Courtesy Frederck Grindele

Photograph taken in 1978 by Marion Varney (K1SLJ). L/R: Brandy Wentworth, author of this article and Fred Grindele of NBD. [Fred was Navy CPO at NBD from the commissioning of station in Aug. 1917 until late 1921.

CPO Carl Herr at base of lookout tower, Otter Cliffs, 1919. Note he's out of uniform. He says it was his day off.
Photo courtesy - Mr. Herr.



LIEUTENANT FABBRI WITH HIS OFFICERS AND CREW, OTTER CLIFFS, MARCH 27 1919.
Photograph - Courtesy Herbert C. Hovenden

NBD - Bar Harbor

waves had to burn within an airtight enclosure in an atmosphere of hydrogen. The arc made its own hydrogen from the alcohol dripping on it. It reminds me of the magazine advertisement which shows Jack Daniel's whiskey being charcoal mellowed, drop by drop. Same idea. Also, it was my job to switch the big antenna from the arc to the spark transmitter when ordered to do so by the control station at Otter Cliffs. Speaking of that spark set, every once in a while the clear, bell-like 500 cycle note would go sour because of a leaky mica gasket between two of the thirty or so quenched gap elements. Then I'd have to change them all to clear up the note. But what I'll never forget for the rest of my days is the standby power plant. It was an old diesel one-lunger with a flywheel as big as your house. To start her, I'd climb up and heat the firing pin red hot with my blowtorch. Then I'd jump down fast and turn on the compressed air – and away she went!"

Following the Armistice, the lookout tower near the brink of Otter Cliffs was converted to a Radio Compass station. Chief Carl Herr was the CPO in charge. Among many other "saves", Herr reports that his compass facility once helped prevent the British cruiser *Raleigh* from running head-on into Egg Rock – a small islet – when entering Frenchman Bay in dense fog. He states, "The *Raleigh* backed down – engines full astern – thus avoided going aground, by a timely bearing and warning from our compass station. The *Raleigh* sent a British major out to Otter Cliffs the next day to explain this happening and to thank us."

Chief Herr tells of another timely rescue: "On July 2nd, 1919, we intercepted an S O S from the British dirigible *R-34*. This was the first crossing of the Atlantic Ocean by an airship. She reported they were running low on fuel because of strong head winds and might not be able to reach their destination – Mineola, N.Y. One of the Navy's destroyers dispatched to her estimated position, confirmed by bearings from our radio compass, advised the airship to descend to a lower altitude where they would probably encounter less wind. They did this. Otter Cliffs then kept the airship advised of weather conditions on the remaining route until she reached her destination safely. The Commanding Officer of the dirigible was so grateful that he asked Otter Cliffs to handle all weather information during *R-34*'s return flight to Scotland."

On Armistice Day, November 11, 1920, the President of the United States awarded Lieutenant Fabbri the coveted NAVY CROSS. The citation which accompanied this high award reads as follows:

> For exceptionally meritorious service in a duty of great responsibility in the development of the radio receiving station at Otter Cliffs, Maine, and the small receiving station at Seawall. Under Lt. Fabbri's direction the station was developed from a small amateur experimental station until, at the end of the War, it was the most important and the most efficient station in the world.
>
> For the President
> /s/ Josephus Daniels
> Secretary of the Navy

The Navy Cross itself, with its little blue and white ribbon is in the Bar Harbor Historical Society Museum together with the citation, a large portrait photograph of Fabbri, and his elegant "dress parade" Navy sword.

On January 23rd, 1921, Fabbri wrote the following letter to Alfred J. Ball, the radio operator on duty at Otter Cliffs who, on November 10, 1918, copied Germany's fourth and final peace message direct from Radio POZ:

> In case you do not already know it, I'm sure you will be glad to learn that the station was awarded the Navy Cross for its services during the War. As Commanding Officer, I was the recipient of the decoration – but you and the others, on whom I chiefly relied, may well feel that you each own a share in this honor. I am enclosing a clipping from the Bar Harbor Times which shows you the citation.

This same clipping from the Bar Harbor Times goes on to report: "The decoration was received by Lieut. Fabbri at his home here. It was characteristic of the gentleman that, when some of his friends called to congratulate him, his comment was: 'I deserve but one two-hundredth part of the honor. The officers and men who served with me deserve as much of the credit as I do.'"

On February 6th, 1922, at the age of only 44, Fabbri crossed the bar for the last time. He died of pneumonia contracted on a hunting trip. He had resigned his Navy commission and was retired.

In 1935, except for the radio compass facility, all the Navy installations at Otter Cliffs and Seawall were razed. They had far outlived their usefulness. Through the intervention of John D. Rockefeller Jr., of nearby Seal Harbor, the radio compass, later known as a Radio Direction Finder (RDF) facility was moved across Frenchman Bay to Moose Island at the tip of Schoodic Peninsula in order that Otter Cliffs could become part of our National Park System. Rockefeller interests were also instrumental, fund-wise, in the building of a scenic road around the periphery of Otter Cliffs Point. Along this road, just across from where the old Otter Cliffs receiving station stood, the Bar Harbor townspeople got together and in 1939 erected a monument, a big boulder of the Island's red granite, with bronze plaque appropriately inscribed, as a memorial to *their* Lieut. Fabbri.

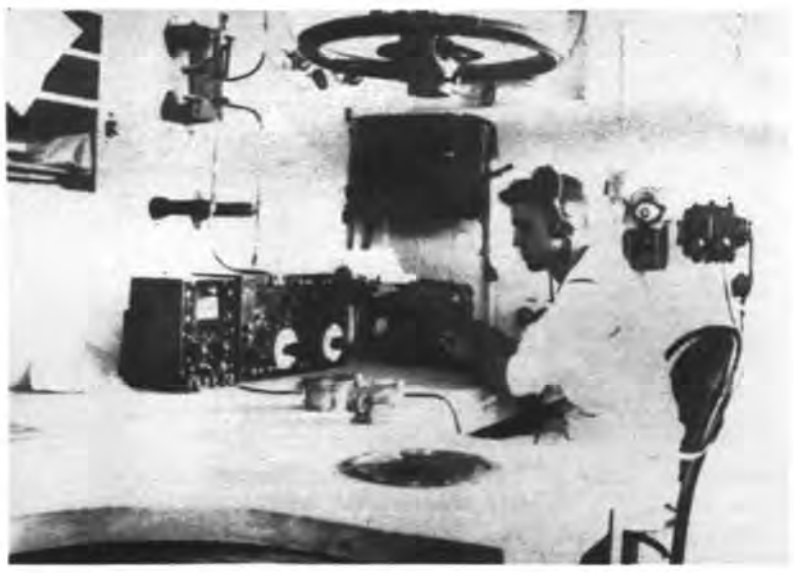
Honoring "Brandy" Wentworth

Member Brandon Wentworth [393-SGP] has graciously given us permission to reprint his book ..."The Fabulous Radio NBD" which he published in 1984. The contents of our paper do not measure up to the quality stock used in his book, both in texture and print size. Our 6-point type may a bit difficult for some to read hence he has consented to furnish members wanting a copy the convenience of ordering direct. Sent your order direct to him... P.O. Box 862, Southwest Harbor, ME 04679. The price postpaid is $4.50 .Brandy's book records a very important period of history during the era WW-1. We feel history owes Brandy a big debt of gratitude for his dedicated effort.

◆The Fabbri Memorial Monument

Radioman Adams at operating position NBD for the Alexanderson Banage Radio using recorder tape. Photo – [Carl Kerr]

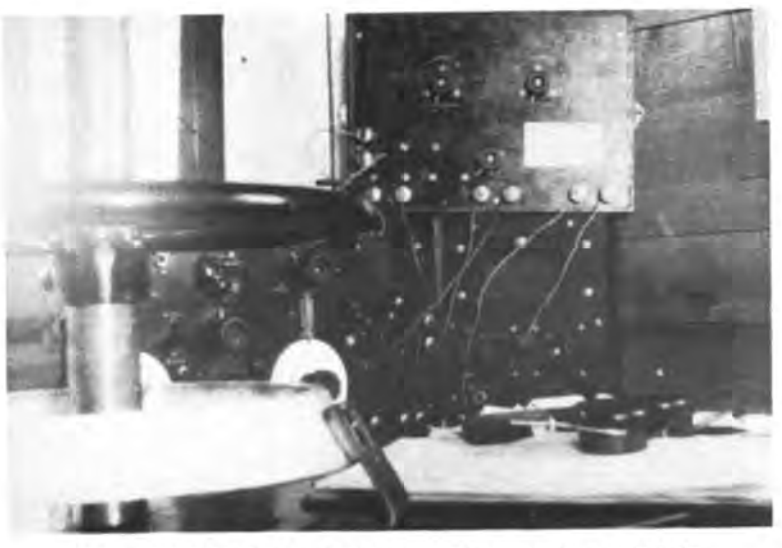
Seawall Remote Transmitter Site. Accirdubg ti "Hank" Grindle, that intrepid motorbike rider is the foreground is none other than Carl Herr !. Photo – [Fred Grindle]



NBD. Operating position (R/Only) at Otter Cliffs. Despite the overhead wheel, this is NOT the NBD Radio Compass – according to Carl Herr. Radioman is unidentified. (Photo – Courtest Ted Hancock).

Radioman Herbert C. Hovenden on duty at Otter Cliffs 1917 – 1918. [Hovenden collection]

NBD – Radioman Ted Hancock's "Pride & Joy" -- The Standby power plant at Seawall !



NBD RADIO COMPASS operating position. NOTE "new" R.F. amplifier which has just been "hay-wired' in, according to Carl – also pair of "Baldies" on the desk ! [Photo – Carl Herr]

The Pilgrimage of a Pioneer to NBD

BY- HAROLD H. BEVERAGE

P.O. BOX BX
Stony Brook, ny 11790
May 14, 1984

Mr. Brandon Wentworth
Beech Hill Publishing Co.
Southwest Harbor, ME 04679

Dear Mr. Wentworth:

I was very pleased to receive a copy of your very interesting book "The Fabulous Radio NBD". It brought back recollections of exciting events and wonderful people, especially Alessandro Fabbri, one of the finest gentlemen that I ever met in my life-time of 90 years! I still keep in touch with "Gunner" Raymond Cole and still correspond with him, especially at Christmas time.

In March, 1919, the General Electric Co. installed a radio-phone on the USS George Washington for use by President Wilson to talk with Sec. of War Daniels in Washington. I installed and operated the receiver, and John* installed and operated the transmitter. I made frequent test calls with the navy depart-ment in Washington, usually with a chap named Franklin Delano Roosevelt. On the first trip of the GW, we were anchored for a week or so in Brest Harbor waiting for the President. Since he was not ready, we returned to the US and made a second trip to Brest. While anchored in Brest Harbor, I saw most of the ships that were returning the troops to the U.S. This included the USS Mount Vernon, formerly the Kronprinzessin Cecilie as I recall it, and of course, the USS Leviathan with Radio Material Officer Gunner Cole in charge of the radio department. While the GW was anchored in Brest Harbor, the NC-4 "buzzed" us and we talked with them on our radiophone. I am sure that most of the traffic from these ships was handled by NBD.

On the second trip of the GW, with President Wilson aboard, we left Brest about July 1, 1919. On July 4th, in mid-ocean, we were informed that the President was to make an address to the troops on C-deck. NBD reported that our phone signals were coming in very strong, so we arranged to broadcast this historic address. We notified some 40 ships in mid-ocean to listen to the address. We placed the microphone on B deck at the spot where the President was expected to stand. At that time, Pre-sident Wilson thought that he had saved the World for democracy and that there would never be a War between the great nations again. Accordingly, he would not talk to anyone other than God. One day, I was dashing around the deck to meet a schedule with New Brunswick, NFF and when I rounded a corner, I almost ran into the President. I apologized most sincerely, but the Pre-sident paid not the slightest evidence that I even existed. Even Captain MacAuley and Admiral Grayson were not able to tell the President about our plans to broadcast his address, so in-stead of speaking from B Deck, he went down to C Deck, about 20 feet away from the microphone, so we were not able to modu-late the transmitter, and the broadcast was a flop. Some wag wrote this up in a magazine article entitled "The Voice that Failed". After the President finished his address, we read it over the radiophone and received reports of good reception from as far away as Texas.

I was interested in your mention of the Hoxie Radio Recording Machine. At the General Electric Lab. in Schenectady, N.Y., I was associated with Mr. Hoxie by furnishing him with signals of various speeds and types for his use in the development of this interesting device. His recorder would operate at very High speeds, but actual speeds over the ionosphere were limited by the narrow bandwidth of the antennas at very low frequencies, and by multipath on the high frequencies, so the machine was not used extensively for recording radio signals. However, a modification of the idea resulted in the variable area optical sound channel for the moving pictures. This development led to the formation of the RCA Photophone Division. A similar optical sound channel was developed by the Bell Labs. using a variable density sound track. I understand that either scheme would work on the standard sound projectors. I have a Bell & Howard 16 MM projector which has optical sound and in addition has a strip for magnetic sound, very handy for home movies since it can be erased and recorded any number of times.

I have visited Seawall several times in recent years since my wife and I used to have our lunch at Annabelle Robbins restu-rant. Now it has expanded into a large motel and dining room.

I have looked for the NBD site, but all I was able to find was a few concrete blocks for anchoring the guy lines. Maybe I did not look in the right place.

Thanks again for your fascinating story of NBD. It brings back memories of exciting times and interesting people.

Sincerely, (sig.) Harold H. Beverage

* (Page or Payne, unable to make it out)

THE HISTORIC KEY OF "NBD"

BY- HAROLD CASTNER

The clock showed "five bells" and an hour had gone,
When they learned that at seven, Carnarvan came on.
They gave a quick glance at the clock on the wall,
And asked if I thought we could hear them at all.

We hastened up stairs where the outfit was laid,
And I saw the receiver that Pickard had made.
That one single audion looked very strange,
But I found the receiver was in the right range.

Just before seven bells, and surprising to me,
I suddenly heard the loud test of a "V".
I sat there in silence, and I didn't speak;
Carnarvan at Belmar, was always so weak.

I tilted the Baldwins just back of each ear,
And I noticed that Fabbri and Cole could both hear.
A space and a break signal followed I guess,
When, clear as a bell, he sent "Carnarvan Press".

A "lid" could have copied a signal so strong,
And I wrote it all down as he went along.
This station at Belmar, I seem to recall,
They seldom if ever could copy at all.

Both Fabbri and Cole showed an interest when,
I told them five-thirty we covered "YN".
I told them the schedules they wanted to know;
"POZ" and "UA", and the op from "IDO".

I found that the signals were better by far,
Than anything possible down at Belmar.
But Taylor forbid us to touch any set,
If the note drifted out, there was nothing to get.

Mr. Fabbri became quite excited I guess,
And sent a report to our own DCS.
But it wasn't so easy as all that my friend,
We had other problems with which to contend.

We never suspected what Taylor would do,
But we found out precisely before we were through.
Between Daniels and Taylor, they both made a vow,
By fair means or foul, to defeat us somehow.

We sent in the most of the copy by far,
But Taylor insisted it came from Belmar.
I'll never forget all the pains that they took,
And resorted to every damn trick in the book.

And then Taylor played the best card that he could-
Recommended the place be abandoned for good!
I'll never forget how the boss looked at me!
He stood there transfixed, just as mad as could be.

He stood there in silence and clinched his fists tighter,
It was then that I learned that this man was a fighter.
He told me to copy as much as I could.
I told him he knew that I certainly would.
He started for Washington that very night,
Determined to put up a regular fight.
He telephoned me, when a few days had gone,
That they had agreed that the test should go on.

This was the crucial battle he won,
And that was when Otter Cliffs really begun.
If Taylor had won, you can take it from me,
There never would been any call "NBD"!

Things happened fast. We were never aware,
They promptly closed Chatham, kicked Taylor "up stair".
Someone got wise what a mess it had been.
From Chatham and Belmar we got some good men.

From all of this mess it was quite a relief.
We could now go ahead, and I was made Chief.
They built rooms for traffic, enlarged the mess hall,
And remoted the spark over at Sea Wall.

They built two large barracks, and got some Marines.
The shacks in the field had the Hoxie machines.
Bill Woods and his crew kept the sets working right,
And the "Spark" and "Arc" crews kept it up day and night.

How pleasant it is for us all to recall,
Such men as Ralph Elliott, Dutton and Ball,
And Scutter and Newmark, Frank Seiler and Bates,
And the fights that we had with Marines at the gates.

And Chief McElaney, who dished out the chow,
And Jimmy legs Grimes, whom we all recall now.
O'Connor and Swanson, who led the Marines;
The ship's cook, Mike Early, who cooked such good beans.

Al. Stevens and Maddocks, the Davis boys too,
And Chisholm and Hovenden of the first crew.
Jim East and Fred Meinholtz; yes, we knew them all,
And the "Morse" men we had were right on the ball.

(Continued on Page 36)

(Continued from Page 35)

NBD

The Historic Key of NBD

John Steele and Harper, and Bruce, so they say,
Invented the Rhombic Antenna one day;
And Proctor and Curtis, Pfieffer and Cole,
The Warrants we had - and - Oh, Oh my soul!

Dear old Captain Tracy, in memory figures,
Who first went to sea in the days of square riggers.
Mr. Berry and Marshall, who ran the ship's store,
And Kumpel the Yoeman, and so many more.

Jack Miller indeed was a musical cuss,
Who got up the band just to entertain us.
At all the church services he took his place,
And played all the hymns with a sneak rolling base.

And Old Doctor Morrison, the two-stripe MD,
The messcooks who permanently worked the KP,
The old Denby trucks that went so damn slow;
You were stuck in as little as one inch of snow.

You all must recall the old mascot airdale.
We all called him "Mocca", he had a short tail.
He certainly was a most seagoing dog,
I can still see him trying to rescue a log!

There was Macintosh, Kenderick, Carrol and Morse,
All there in the office to wait on the boss.
With all this activity, anyone might,
Imagine the letters that he had to write.

The thousands of messages handled on spark;
The millions of words that we copied on arc.
The total amount there is no way of knowing,
But it took a big crew just to keep it all going.

Each watch had its chief for the eight-hour trick.
The Morse men we had were the best you could pick.
With work of this kind it also requires,
To be relayed again over all the leased wires.

With all of this work and the hundreds of men,
There never will be such a set-up again.
Electronic progress reveals that it means,
Instead of the men, it is done with machines.

By the end of the war we had grown to such size,
The "big brass" in Washington all had become wise.
They learned what a marvelous job had been done,
And a whole lot was said to commend everyone.

We all were delighted when we heard the boss,
Was honored by wearing the great Navy Cross.
The President sent him a citation too,
In full recognition of what we'd been through.

And so, on this day, just us few who remain,
Have gathered, recalling those old days again.
It's forty-five years since he passed on,* and yet-
As long as we live, we will never forget.

We all are aware many others of these,
Are now in the ranks that we call "Silent Keys"
How long we may live, there is no one can tell,
But today, we must all say a final farewell.

POET LAUREATE OF N.B.D.

Harold Castner
CPO/Chief Radioman, NBD.

*Note: Castner wrote this undated poem in 1967 on the 50th Anniversary of the commissioning of NBD (in 1917). Castner became a Silent Key in the 70's. - BW

30

LONG ISLAND'S GRAVEYARD OF SHIPS

Davy Jones Extracts Heavy Toll

By JERRY CASSIDY

ONE HUNDRED AND FIFTY years before President George Washington commissioned the building of the lighthouse on Montauk Point, the turbulent, rocky shoals there had claimed their first recorded vessel. Since then the hungry seas surrounding Long Island have devoured over 600 ships, with the area just south of Block Island being the most voracious.

Some say the winds of winter still whistle with the screams of the 131 passengers who went down with the Lexington, a steamer that sank off Eaton's Neck in 1840; others swear they have seen Spanish galleons, with sails awind, despite dead calm weather, bearing down on them, only to vanish.

The lore and legend of the seas are plentiful on Long Island, from the mysterious "Money Ship" that spewed up at least 60 gold coins onto Southampton's beach to the German Sub, the U853, which was sunk off Block Island with all crew members aboard, including the oldest, the captain, who was 23.

And it is this fascination with both history and the seas that leads divers to spend hours traveling to wrecks that they are able to spend only 15 minutes examining.

Although there are an estimated 600 wrecks surrounding the Island, only about 45 of them are divable. Some have joined their crews in being only skeletal remains; some are buried in the shifting sands of the ocean bottom and some are in waters too deep or too dangerous for diving.

But those that are divable are a source of continuing excitement. "I've been down on the Oregon, any number of times," said master diver Ed McClure. "No two dives, even on the same wreck, are the same."

Here is a list of the most dived upon wrecks in the waters south of the Island.

The Oregon

This 360-foot wooden Cunard Line ship was known as the Queen Mary of its day. It sank in 130 feet of water off Point Beach, Center Moriches at 3:45 a.m. on March 14, 1886, after a collision with a three-masted schooner. The schooner with its crew, sank, forever unknown, while the Oregon stayed afloat long enough for its complement of 845 passengers and crew to be rescued by the steamship Fulda and a schooner, the Fannie A. Gorham. But at 1:30 p.m. the Oregon, nose first, sank in 60 feet of water, 13 miles offshore.

The U.S.S San Diego

This World War I cruiser was the victim of German mines planted 20 miles off the beach at Point O'Woods, Fire Island. Fifty lives were lost in this disaster, and the San Diego has claimed at least two more divers since then. The ship went to the bottom in 110 feet of water, upside down. After this disaster, the Coast Guard cleared the waters of mines, with two of them finding their way to the beach at Westhampton.

U853 German Submarine

This was one of the tragedies of World War II, when, because of radio silence, the German sub did not know the war had ended. On May 5, 1945, the U853 sank a U.S. freighter, the Black Point. Within three hours, three U.S. ships, a destroyer, the Ericsson, and a Coast Guard frigate, the Moberly located the sub and sank it about ten miles southeast of Block Island.

The Larchmont

This side wheeler steamboat sank after a collision with the schooner Harry P. Knowlton in Long Island Sound on Feb. 12, 1907, a bitterly cold winter night. All 131 on board perished in the Sound, southwest of Block Island.

The Orundo

The Orundo was a barge torpedoed off the south shore of Jones Beach, about 30 miles out in 130 feet of water. One of the novelties of diving on the Orundo is that there are two steam locomotives on its deck.

The Iberia

This sea tug went down in 1880 four miles off Long Beach in 55 feet of water. It was carrying a cargo of whisky, illegally.

Some of the other favorites of divers are the USS Turner off Riis Park; The Stone Barge off Fire Island, the Black Rock off Sag Harbor; the Fran S., a tug off Atlantic Beach; the Pinta, off Bellemore, N.J., and the Mohawk, a freighter, which went to the bottom off New Jersey in 75 feet of water after a collision in 1935.

(Maritime Museum photo)

The Oregon (above) a Cunard Line ship, sinks off Point Beach, Center Moriches, in 1886.

About 600 ships are resting at the bottom

Map locates various shipwrecks that have occurred off the coast of Long Island.

The world's first radio broadcast

The Province Thursday, Nov. 17, 1983

Graphics by Ted Baker

By AINSLIE MANSON

Christmas Eve, 1906. A still, clear night in the Caribbean. Wireless operators on the fruit boats of the United Fruit Co., had just received a mysterious morse message to stand by at 9 p.m.

Suddenly, through the heavy static over their earphones, they heard ... could it be? Voices! Music! Oh Holy Night played on a violin with voice accompaniment during the last verse.

"It could only be an angel," said one astonished operator, staring up into the starlit sky.

Though they didn't realize it at the time, the little fruit boats and many other vessels in the Caribbean and the Atlantic had just heard the world's first radio broadcast.

Who was responsible? A Canadian whose story was almost completely forgotten until a Torontonian, Ormond Raby, dug it out in the 1960s.

Reginald Aubrey Fessenden was born near Sherbrooke, Que., at about the time the Atlantic cable was landing at Heart's Content, Nfld.

Though no one realized it at the time, the two incidents were related. The chubby little baby boy was going to be responsible for another very important phase of communications — not only in Canada, but the whole world over.

From almost the time he first opened his eyes, Reggie was a curious, questioning child. His parents should have been proud of their son, but they were terrified he was going to turn out just like his grandfather Trenholme, who had been an inventor and had died a pauper.

Fortunately, Reggie had an uncle who cared for him and was impressed by his scientific curiosity. Uncle Cortez was a maths and physics teacher and he secretly encouraged the boy.

In 1876, the Fessendens moved to Fergus, Ont. Shortly after, Rev. and Mrs. Fessenden carefully hid from their son all the newspaper articles mentioning Alexander Graham Bell's tinkerings in nearby Brantford.

But Uncle Cortez had actually attended the first telephone demonstration at the Bell's house. He not only saved all the clippings for his nephew, but he also supplied him with first-hand news of the event.

When Reggie graduated from Trinity College School in Port Hope, he returned to Quebec to Bishops College in Lennoxville. He taught at nearby Bishops School and studied at the college in the evenings.

He left Bishops before obtaining his degree because he became embarrassed that his parents were going into debt for him. He felt his two younger brothers also deserved a good education.

He took a teaching job in Bermuda, but only to enable him to earn enough money to go to New York and work with Thomas Edison. Canada, unfortunately had nothing to offer him at that point. Neither a job nor the training he required.

His years with Edison were exciting for the young, inquisitive inventor. He began to dream of transmitting the sound of the human voice without wires ... he asked his boss's opinion.

Edison's reply was not encouraging. "Fezzie," he said, "What do you say are man's chances of jumping over the moon? I figure that one is about as likely as the other." But Fessenden refused to put his idea aside.

For years the young Canadian longed to return to his homeland. He applied for a position at McGill University, but was rejected. Instead he became head of the Electrical Engineering Dept. at the University of Pittsburgh.

In 1899, Marconi sent his first wireless telegraph message across the English Channel. Reginald knew he could do better. He knew he was near to sending voice without wires.

He took a holiday back home in Canada to mull over his ideas. He and Helen (whom he had met and married in Bermuda) rented a cottage with Uncle Cortez.

One day at the cottage, while dreamily throwing stones into the lake and watching the widening circles, Fessenden realized that Marconi's idea of sound transmission was all wrong.

It wasn't like a whiplash or an electric spark shot into the air. Sound transmission he now knew, was more like a continuous wave or a light from a flame. With this understanding, he was now certain of success.

In 1900 he successfully transmitted voice between two towers. He then perfected a more effective means of sending morse, and sent the first two-way telegraph broadcast across the Atlantic.

In November, 1906, while making voice tests in New England, he received an exciting morse message from his astonished assistant in Scotland who had just heard his voice!

He then proceeded with plans for his Christmas present for the fruit boats in the Caribbean.

Canada at this point should have begged him to return home ... but it had just given a $75,000 grant to Marconi. To make matters more difficult, Marconi had tied up all the rights for radio transmission throughout the British Empire.

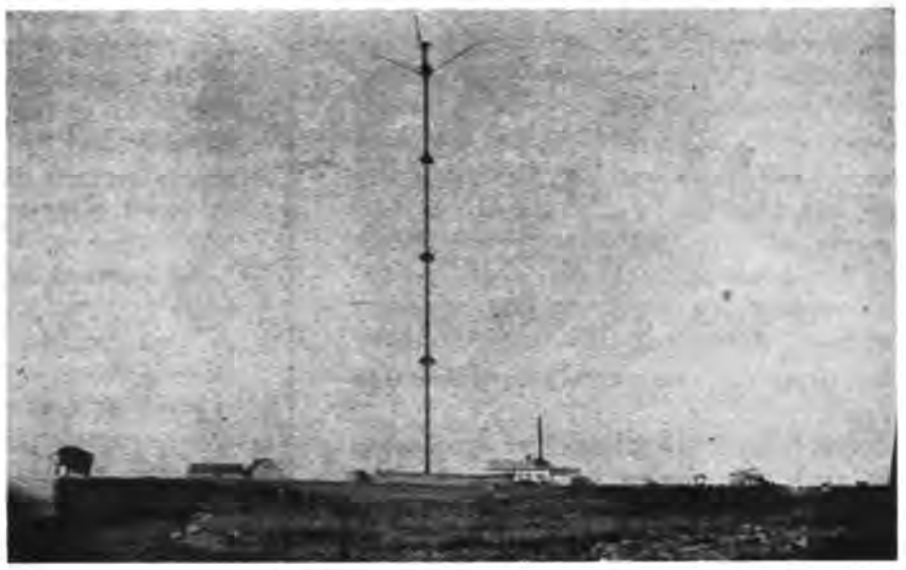
In 1928, after many penny-pinching years and continuous court actions against corporations that were using his radio patents, he won a settlement for nearly a million dollars.

He died on July 22, 1932. Canadians hardly noticed.

The Fessenden System

Reginald Aubrey Fessenden

The Guiness Book of World Records list the First Advertised Broadcast as having been made on Dec. 24 1906 by Prof. Reginald Aubrey Fessenden (1868-1932) from the 420 ft. mast of the National Electrinc Signaling Co., at Brant Rock, Mass. The Transmission included Handel's "Largo". Mr. Fessenden had achieved the broadcast of speech as early as Nov. 1900 but this was highly distorted. There are several others who claim the dis tinction of being 'first' among them our own member Ray Newby, 49-Sr. SGP who broadcast on a scheduled basis in 1909. Who was First ? --send in your documentation.



Fessenden Station at Brant Rock, Mass.

Marconi puts Signal Hill on the map

Guglielmo Marconi was not your usual, run-of-the-mill, down-at-the-heels inventor who spent years living on beans in a garret, waiting to be recognized.

His parents were very well off, and as a young man, Guglielmo did his scientific research in the comfort of a luxurious library on the family estate near Bologna.

In 1894, reading about Rudolph Heinrich Hertz's work with electromagnetic waves, he decided to do a little experimenting on his own.

The following year, he succeeded in sending signals across his estate without the use of wires.

When his own government did not seem particularly interested in his discoveries, Marconi went to England. Here he formed the first wireless company in 1897, installing wireless sets in lighthouses along the English coast.

In 1899 he sent the first wireless telegraph message 137 kms across the English Channel.

He then decided to try a greater distance. He set up a station in Cornwall and then crossed the ocean to Newfoundland. He and his men unpacked their gear near St. John's on the high barren hill now known as Signal Hill.

He had discovered that the higher the aerial, the farther the message could be sent. With the help of an enormous kite, he successfully received the letter "s" (three dots) all the way from Cornwall on Dec. 12, 1901.

He then had to make a move to Glace Bay, N.S., because he was informed that the Anglo-American Telegraph Co. held a monopoly on all communications in Newfoundland.

He set up a station and was given a government grant for $75,000. He established the Marconi Wireless Telegraph Co. of Canada, later known as Canadian Marconi.

Marconi was not a Canadian but because of his years of work in this country, Canada took an important part in the formation of a communications service now well known throughout the world.

Von Cabots Tower - St.Johns Nfld. Site of First Contact with Europe. Fisherman's home on shore with boat in foreground. Picture circa 1940 by Walter D. Smith - 267-P

Early Day Log of a Trans-Atlantic-Liner

(Continued from Page 40)

the waters widen are merely continuing their conversations with the shores now slipping rapidly past. Your message meanwhile will be delivered almost anywhere in the United States within an hour and in near-by cities in much less time.

The wireless service is the last detail needed to give you the impression that your steamer is a great floating hotel. A steward comes to your room to deliver an aërogram written on land a few minutes before, as any messenger boy would look you up at home. If you are walking on deck or lounging in the smoking room or library, you are paged exactly as in a hotel. Meanwhile a bulletin posted at the head of the main companionway or in the smoking-rooms, announces the latest weather forecast, the land station and the various ships then in wireless communication. A little later the daily newspaper will be published.

One of a thousand advantages of having the wireless apparatus aboard is the control it gives the captain if his ship should chance to ground down the harbor. The ship's owners are informed about the trouble almost immediately and assistance can be rushed from the nearest point in a few minutes. There is the case, for instance, of the great liner with a thousand passengers which sailed from New York one election day and stuck her nose in the mud just inside Sandy Hook. Late at night a tug filled with newspaper men ran down the bay and came alongside. To their surprise they found the passengers in high good humor, lining the decks and shouting the latest election returns, which were being announced meanwhile in the cabin exactly as on any newspaper bulletin board.

The ship keeps its wireless connection with land through the Sea Gate station for several hours, even after the point has been left far astern. If the vessel be bound down the coast, a formal report will be sent from the Ambrose lightship and later Scotland lightship. The transatlantic liner keeps her instrument carefully attuned to the tall masts at Sea Gate until she has left them about ninety miles behind. About this time she will add "Good-by" to one of her messages, and turn to the next wireless station on her course at Sagaponack, Long Island. Throughout the long run along the shore of North America she will let go one wireless grasp only when another is within easy reach.

Out here on the Atlantic, far out of sight of land, the wireless station becomes far more interesting than it appears ashore or alongside the dock. A shore station may be a marvelous toy, but at sea this invisible link with the land is always more or less in one's mind. The door of the wireless booth seems to open upon a bridge which crosses the sea. The wireless room has the fascination of a newspaper bulletin board, since all the news must reach one by this channel.

Wireless apparatus on S. S. *Mauretania*

It is considered a great privilege to "listen in" during an Atlantic crossing. There are very few hours indeed when a visitor to the wireless-house cabin would not be seriously in the way. If a corner of the cabin be found for you, however, and the receiving apparatus clasped to your ears, you will be amazed to find how busy the apparatus is kept. The air above New York harbor is far more crowded with wireless messages than are the waters with ships. You are, besides, in range of many commercial stations and hundreds of amateurs. Long after the shores have disappeared from view the incessant chatter continues.

Before an hour has passed the visitor finds himself distinguishing between the faint long distance calls and the local wireless messages. With a little more practice it would be possible to recognize the touch of some of the operators.

Some four hours after your ship has passed out of Sandy Hook, or after a ninety-mile run, the operator bids the Sea Gate station good-by and begins to feel ahead for the next stations at Sagaponack or Siasconset. If your ear is sensitive, you have probably heard Nantucket's call some time before. For a few minutes all sending and receiving is stopped while the ship throws out her name, over and over again. Soon the wireless man catches Nantucket's reply, and explains that he could recognize the operator's sending among a thousand.

"It is as easy to recognize an operator from his touch as it is to pick out a familiar voice in a crowd," he continues. "They sound much alike to you, but you will soon get to know a man's speed, his touch of the key, whether light, strong, or hesitating. Almost every operator, besides, has some little trick of his own. Then there is a great deal of difference in the machines themselves."

Then he plunges into the work of sending and receiving messages. It was the Nantucket station, he will explain to you, that first picked up the C.Q.D. call of the ill-fated *Republic* and by its promptness gave the rescue steamers the news in time to save all on board. The first call of a station is always listened to with a thrill of expectation.

An incessant chatter of shore talk reaches every ship, but your boat, you will find, has no time for idle gossip. Let a faint call flash in from the Atlantic and every nerve is strained to catch it. From now on you will be constantly picking up news from the incoming steamers and their messages are certain to be interesting. When a steamer is far out on the Atlantic and out of direct communication with the stations near New York it is cheaper to relay messages from one steamer to another than to send to the far northern stations and have them cable New York. In other words the steamers scattered along the ocean lanes are used as stepping stones to communicate with New York, and *vice versa*.

About this time you may look for news from the steamers on "the banks," as the region along the eastern shore of Newfoundland is called. Such news is of the greatest importance and must be carried instantly to the captain, who makes his plans accordingly. The incoming steamer reports the weather, the presence of fogs or icebergs and their exact location. News of this kind takes precedence over everything else and the apparatus is tuned to catch these reports whether it gets the regular messages or not.

The "tuner" on S. S. *Mauretania*

Your wireless operator seems to be on the friendliest possible terms with all the wireless stations. The men are constantly changing about between the ships and the shore stations. To this group of operators the world seems small indeed. The men may not meet for years and yet in stations thousands of miles apart this friendship is kept alive by almost constant conversation.

When Siasconset is dropped astern the apparatus is attuned to the lonely station at Cape Sable on the bleak shores of Nova Scotia. The steamer has been plowing steadily ahead for two days over the trackless ocean, but is still in almost instant communication with its last port. The wireless man will probably find time for a friendly word or two to cheer up the lonely watchers in these northern stations. The operator on one of our crossings explained that on his westward trip a few days before Cape Sable had been silent for as much as half an hour. There had been a slight accident to the machinery and in this isolated position the wireless man must make his own repairs. Our operator understood perfectly, but he found time to ask his friend if the fishing were good and received instantly an indignant reply.

After Cape Sable, the ship continues its shore messages through the wireless station at Sable Island. Our ship is far north now and the wireless stations are well up towards the region of perpetual snows. If you have sailed out of New York on a hot summer's day it will be difficult to picture to yourself the man who is now talking to you, perhaps wrapped in heavy winter clothing, looking out on a field of ice. It is not uncommon to

(Continued Next Page)

Delivering a wireless message

- ENROUTE - ACROSS THE ATLANTIC

receive messages from the tropics and from the stations near the Arctic circle at the same moment. If the operator wishes to do so, he can tune his instrument now to pick up the series of wireless stations scattered along the Labrador coast. These stations are not used by the transatlantic steamers but work only with the vessels, sealing expeditions, etc., plying in these waters.

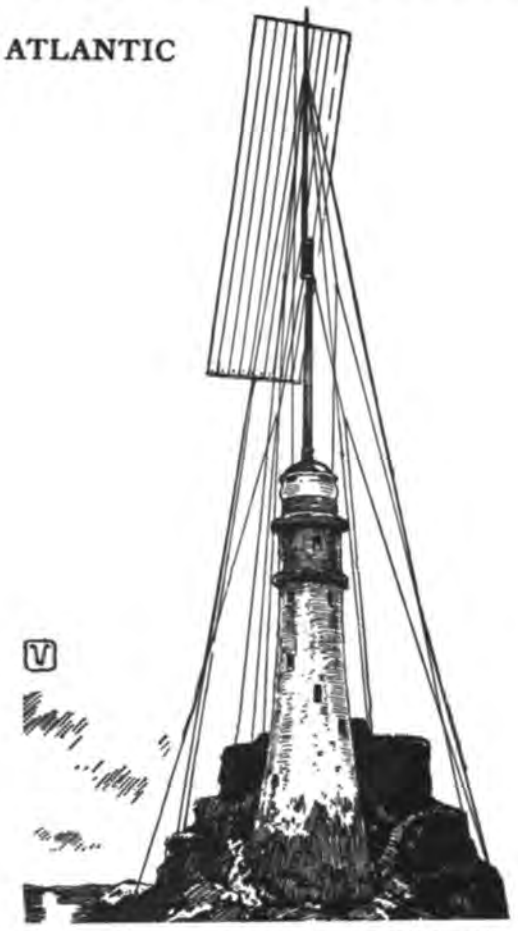
The good ship is now nearing the easternmost point of North America and picks up the last land station at Cape Race. Once more a batch of messages is received and despatched. Cape Race is not a post to be coveted. It is one of the most isolated in the world and throughout the greater part of the year perhaps the coldest. Operators stationed here have gone blind from the glare of the sun upon unbroken ice fields. In leisure hours they have some compensation in hunting wild northern game. Yet throughout the long Arctic winters they have the latest news only a few minutes later than the newspaper offices in London or New York. An operator stationed here once broke the monotony of his life by betting with the wireless men on the ships on the baseball games which were reported to him, inning by inning.

Ever since the steamer left New York the editors of her daily newspaper have been receiving the latest news and publishing it in their daily editions exactly as in any well-equipped newspaper ashore. This news is sent out regularly from a station at Cape Cod. The news of the world, including the latest stock-exchange quotations, is boiled down to five hundred words and is sent broadcast out across the Atlantic at ten o'clock every night. It is thrown out for about 1,800 miles in all directions so that any vessel between America and the middle of the ocean may catch it. When the despatch is completed there is a pause of fifteen minutes, when it is repeated over the same enormous area and the repetitions continue steadily until 12:30. The ships suit their own convenience, picking up the news at the most convenient hour, when they are not engaged with other messages.

When the calls from the Cape Race station grow faint and are finally cut off, our steamer ends its direct service to shore. We are now more than one-third of the way across the Atlantic. Nevertheless the ship is rarely ever completely out of touch with the shore throughout the crossing. The ocean lanes are so peopled with great ships that a message can be relayed from ship to ship and thence to the land station in an incredibly short time.

And for nearly a thousand miles farther across the Atlantic the regular news service still pursues our ship, to the very middle of the Atlantic. Regularly every night at 10:30 the operator tunes his instrument to the Cape Cod station and writes down the latest news at the dictation of the operator now more than a thousand miles away. The ship's course has marked off a considerable arc of the circumference of the globe and the ship's time has been set ahead until the news sent out at ten arrives early in the evening, even before it is dark.

Half way across the Atlantic, before the Cape Cod messages have died away, our operator catches his first message from Europe, flung out to welcome him from the powerful station at Poldhu on the Cornwall coast. There is no region of the broad Atlantic so remote that we cannot listen to one or the other of these stations. Poldhu sends out



Fastnet Light converted into a "Blind Lighthouse" or wireless station

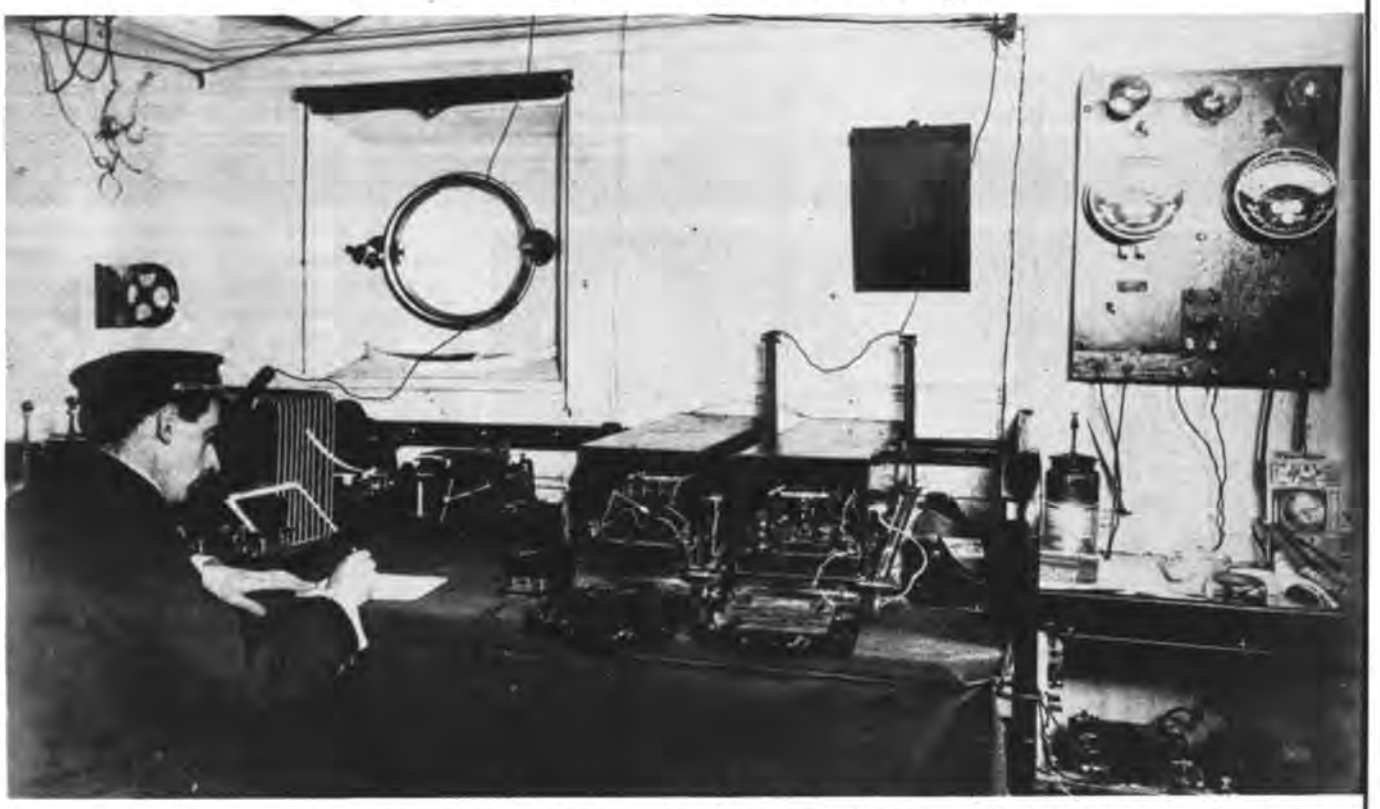
news and the stock reports, five hundred words, exactly as does Cape Cod, beginning every morning at two and repeating the messages at regular intervals until three o'clock. And so the wireless newspaper you pick up at your breakfast in any region of the Atlantic is quite as up-to-date as the one you read at home.

Even in the middle of the Atlantic there is very little rest for the wireless operators. There is scarcely an hour our ship is not in communication with one or more vessels. On a single crossing of one of the great steamships there are from five to six hundred wireless messages transmitted and received. When a ship is picked up a notice is posted in the companionway, smoking-room, and elsewhere, announcing that messages may be sent to such a vessel up to an hour, easily calculated, when she will be out of range. There are sure to be a number of passengers on board with friends on other vessels who are only too glad to exchange messages.

The first direct landward messages are exchanged with the station at Crookhaven on the Irish coast. Land will not be sighted for many hours but the passengers are at once busied with preparations for going ashore. There are scores of messages filed for both sides of the Atlantic, announcing a safe arrival, for under the protecting arms of the wireless one feels himself almost ashore. Greetings are exchanged, invitations extended, and the details of land journeys arranged.

When Crookhaven is dropped the Liverpool steamer next picks up the wireless station of Rosslare at Queenstown, and Seaforth at Liverpool. For the other steamers there is the Lizard, Bolt Head, Niton, and C[illegible]rg, passing in rapid succession.

History in the Making



1901 - Crossing the Atlantic This is a rare picture of one of the 'real' pioneers of the 'Wireless', taken aboard the crack Liner SS Philadelphia as she cross the Western Ocean. On duty (pictured) is Operator Kelley. It is reported Mr. Marconi himself helped to install the equipment and made the first trip to supervise its operation. Mr. Kelley was later relieved by F.S. Stacey(1902). Mr. Stacey was recorded as being Great Britain's FIRST MARINE OPERATOR. Newspapers of the day gave great coverage to Mr. Stacey contacting a station 150-miles distant... a great achievement when normal coverage was about 60 miles. Early frequency used was (approx) 300 meters. Later 600 meters was found more servicable. Picture - courtesy of Cmdr. Karl H.W. Baarslag - Author "SOS" TO THE RESCUE - 1935.

"Wireless Log" Recorded on Trans-Atlantic Crossing -1911

MDC - S.S. CEDRIC 1911

A WIRELESS LOG

Sept. 28 — In communication with Liverpool all day.

Sept. 29 — In communication with Crookhaven all day.

Sept. 29 — 12:40 a.m., signaled Scheveningen Haven, 315 miles.

Sept. 29 — 1:50 a.m., signaled Pola, Austria, 930 miles.

Sept. 29 — 9:20 p.m., signaled Scheveningen Haven, 600 miles.

Sept. 30 — 12:20 a.m., signaled St. Marie-de-la-Mer, 920 miles.

Sept. 30 — 1:11 a.m., signaled Seaforth, Liverpool, 400 miles.

Sept. 30 — 2:40 a.m., signaled Scheveningen Haven, 705 miles.

Sept. 30 — 10:39 p.m., signaled Seaforth, Liverpool, 800 miles. Sent messages.

Oct. 1 — 3:20 a.m., signaled Seaforth, Liverpool, 890 miles.

Oct. 1 — 9:30 p.m., signaled s.s. *Cameronia*, 1,000 miles.

Oct. 2 — 1:40 a.m., signaled Cape Race, 900 miles. Sent messages.

Oct. 2 — 2 a.m., signaled Seaforth, Liverpool, 1,250 miles.

Oct. 2 — 7:45 p.m., signaled Cape Race, 550 miles. Sent messages

Oct. 3 — In communication with Cape Race all day.

Oct. 3 — 11:59 p.m., in communication with s.s. *Kaiser Wilhelm II*, eastbound, and remained in touch until 8:50 p.m. on Oct. 5th, making over 1,000 miles ahead and astern. *Kaiser* says, "We cannot get out of your range."

Oct. 4 — In communication with Cape Race and Sable Island all day.

Oct. 5 — In communication with Sable Island and Cape Sable all day.

Oct. 6 — In communication with Cape Sable, Siasconset, Sagaponack, Cape May, Sea Gate, all day.

Oct. 7 — In communication with Sea Gate. Docked 8 a.m

On October 2nd the *Cedric* was in communication with both Cape Race and Seaforth together; the signals from both stations were very good, the total distance covered from Cape Race to Seaforth being 2190 miles.

> Puck: I'll put a girdle round about the earth
> In forty minutes.
>
> Midsummer Night's Dream.

"Enroute" A Crossing Diary

ACROSS THE ATLANTIC

SAILING day finds the wireless operator early at his post. Long before the passengers come aboard and commence to search for their state-rooms, the wireless booth is a center of activity. The machinery is carefully overhauled, supplies are looked to, and a number of test messages are sent out. The operators do not call up any one in particular at this time, but depend upon the sharp crack of the sending apparatus to tell them if everything is working properly. Every detail of the apparatus is examined, including of course the wires strung from the topmasts. The tests are made fully three hours before sailing, when the operators are free until the boat leaves, almost the only care-free interval they will have until the steamer is docked on the other side of the Atlantic.

The first regular wireless message is sent out as the steamer slowly backs from her pier. It is timed just five minutes after sailing. The sharp crack of the sending apparatus is usually drowned by the roar of the whistle calling for a clear passage in mid-stream. All transatlantic steamers send to the wireless station at Sea Gate, while the coastwise steamers call up the station on top of one of the skyscrapers on lower Broadway. This is merely a formal message, but no wireless log would be complete without it. This first message is known as the "T R," no one seems to know just why. The wireless station replies as briefly as possible and the wireless operator shuts off.

Business soon picks up. Before the passengers are through waving farewells some one has usually forgotten an errand ashore or decided to send a wireless (aërogram is the word) and visitors begin to look up the wireless station. It is usually a detached house on the uppermost or sun deck, just large enough for the mysterious-looking apparatus and a bunk or two. Before the voyage is over most of the passengers will have become very familiar with the station, for it is after all about the most interesting place aboard. If no messages are filed for sending, the operator picks up the shore station and clicks off the name of his ship, as for instance, "Atlantas. Nil here."

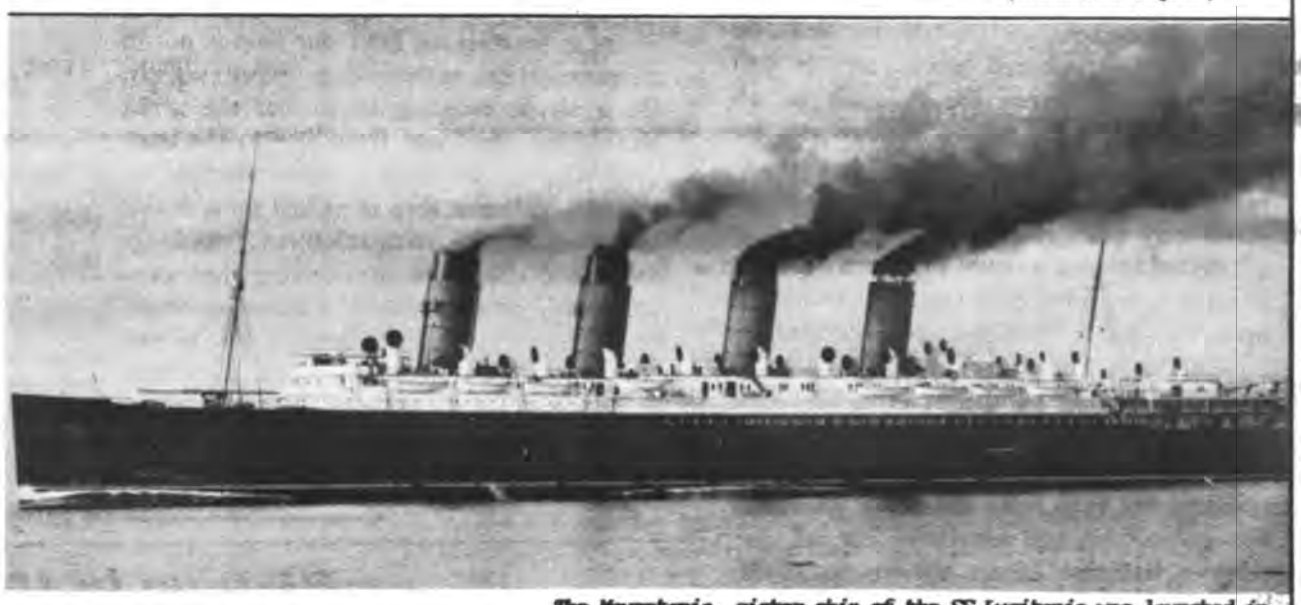
Should the operator have any messages to file he will add the number, for example: "Atlantas 3."

The receiving station picks this up and replies quickly. If it has no messages to send, it will reply, "O K Nil here."

Should there be any messages to deliver it will reply, "O K G" (go ahead).

All the way down the harbor the great ship is in constant communication, sending and receiving belated questions and answers. The passengers who have been calling their farewells from the ship's side as

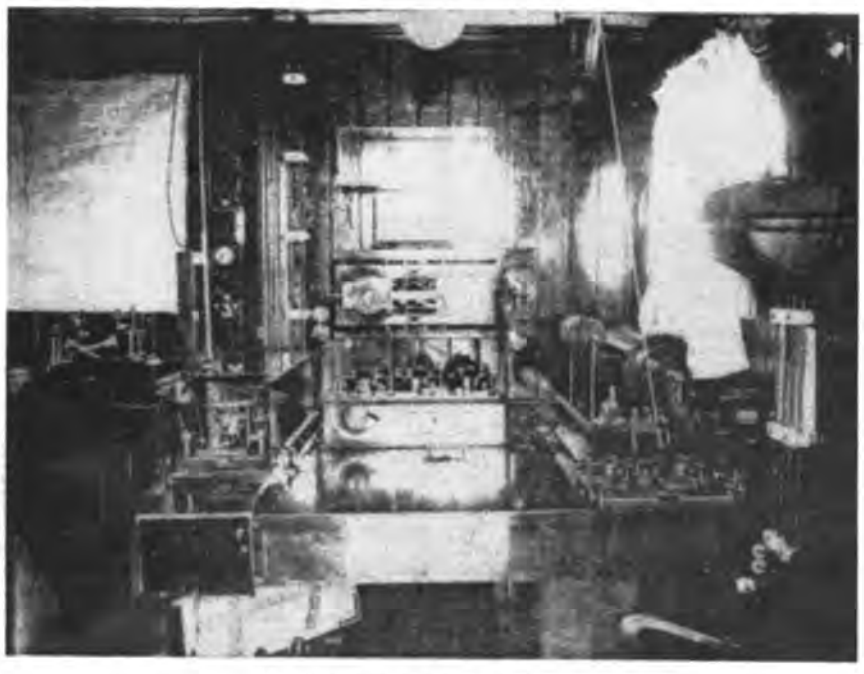
(Continued on Page 38)



MAURETANIA-I CALL MGA

The Mauretania, sister ship of the SS Lusitania was launched in in 1907. She was 790 feet long, 88' beam and 61' draft. Normal speed was 25.5 knots. However she captured and held the "BLUE RIBBON" for some 22 years. She lost the title briefly to her sister ship but gained it back and never lost it until withdrawn from service shortly after the Queen Mary was launched in 1934. The Mauretania carried 563 First Class; 464 Second and 1138 3rd Class passengers. She became one of the most popular ships on the North Atlantic Ferry route and became known as "The Grand Old Lady

The SCIENTIFIC & HISTORICAL RECORD OF THE EARLY DAYS OF WIRELESS



Wireless apparatus on S. S. *Mauretania*

******** *The "Wireless" — Our Proud Heritage !* ********

SPARKS JOURNAL

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TO:

Newsletters from the Society of Wireless Pioneers, founded 1968
~ Dedicated to the History of Seagoing Wireless Operators ~

Special thanks to the following for these documents:
Key [SK = Silent Key, SGP = Spark Gap Pioneers, P = Pioneers, V = Veteran, M = Member, Sparks = Worked at Sea]

(SK) Ed Raser, W2ZI, Radio Pioneer, Sparks, SOWP #35-SGP
(SK) Bill Gould, K2NP, Radio Pioneer, Sparks, SOWP #565-P
(SK) Matty Camillo, W2WB, Sparks, SOWP #750-SGP
(SK) Dare Robinson, WB2EVA, Sparks, SOWP #2284-SGP
(SK) Ray Brooks, K2LTX, Sparks, SOWP #1387-P
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